

THE *Country* GUIDE

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You knew

the moment you saw it—this was your car. New, *all-new*, every inch and pound of it. A big, brawny frame under a sweeping, curved-arch silhouette. Longer, wider, lower—with a road-hugging look that beckoned you to get in and go! When you saw it, you said "This is it! This *all-new* 1949 Mercury is for me!"



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(Photo by Harold M. Lambert)

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BOTTLES.**

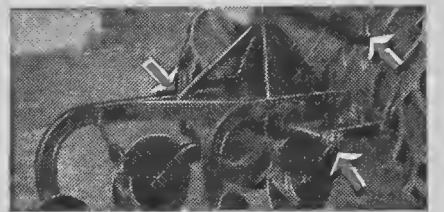


THE ONLY TIME THAT COUNTS IS WORKING TIME



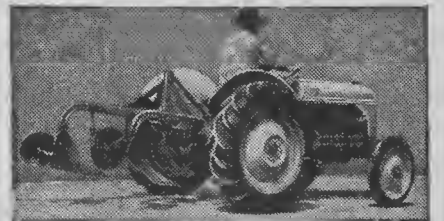
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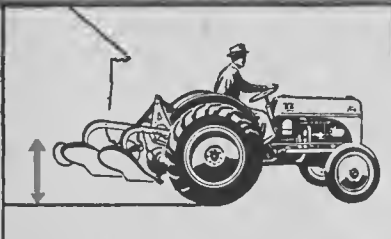
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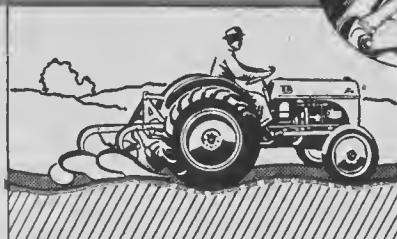
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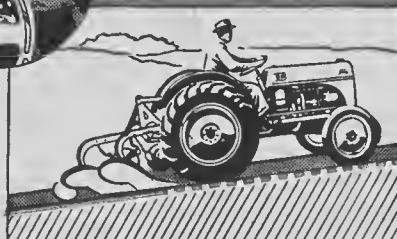
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UNDER THE PEACE TOWER

Conventions dominate the scene.

by AUSTIN F. CROSS

HERE we are, half way between the Liberal convention and the Progressive-Conservative convention. So often in this column we put on our Janus-face. Let's do it once more, first to look back, and then to look forward.

I'd like to give you a once over quickly of the Liberal effort here at the Coliseum at Ottawa. First of all, it was a rigged convention, the subtle hand of none other than the Mahatma himself deftly but inexorably pulling the strings. On the other hand, the convention lent itself to the rigging quite amiably, since the delegates were, generally speaking, eager to have Hon. Louis St. Laurent as their next leader, none too keen, apparently, about Hon. James Gardiner.

All three speeches for leadership were a disappointment. Hon. C. G. Power, wartime Minister of National Defence for Air, got off a lot of stuff about the government, and at times sounded like Peck's Bad Boy from Temiscouata, Jean Francois Pouliot. But Power himself fed at the government trough for nine years, had little to complain about the system he helped to perpetuate.

Hon. Jimmy tried too hard, but he met the enemy on their own ground. Instead of tossing his manuscript away and speaking from the shoulder, he entered the other fellow's camp when he stuck to his manuscript. Then he tried to cover too much, and he buttered every part of Canada. What the crowd wanted from the Lemberg Larruper was a tough, fighting speech, a real political effort. To hear Gardiner in an economic cover-all was like hearing a lion suddenly giving forth with the moo of a cow. This was Gardiner's great chance, but he couldn't make it.

ON the other hand, Hon. Mr. St. Laurent was not so effective either. It reminded me somewhat of John Bracken at Winnipeg in 1942. I always felt that when Honest John went from his Stradbroke home that night to accept the Tory—pardon me, Progressive-Conservative—nomination, he reached round in a drawer, grabbed the first speech he got his hands on, and hustled out to the auditorium.

It had to do with wheat, and was as apt as a story on bird life, as far as that convention was concerned. St. Laurent talked about national unity. But nobody is against that; like Christmas, we all favor it. However, it gave the crowd a chance to see him, and they apparently liked what they saw. The score of 848 (for St. Laurent) to 323 (for Gardiner) told the story. Thus the man who wanted the job so badly couldn't win. And

the man who strove for it so little could not miss. Truly, "there is a divinity that shapes our ends, rough hew them how we will."

Of some interest to all lady readers, and definitely to a lot of males, too, is the fact that once more we shall have a petticoat government. I have always felt that the country was worse off because neither Mr. King nor Mr. Bennett had a wife to keep him on the track. Women lend a gracious back-

ground to any political scene. Even the great Franklin Roosevelt openly remarked what a great help his wife was. Yet for years now, we have had a couple of crusty old bachelors running the country. Hon. R. B. Bennett rumbled around in a 17-room suite down at the Chateau Laurier, while Mr. King and his succession of dogs called Pat poked about the three floors of Laurier House.

As these men have got older, Ottawa has become less and less socially minded, and something has gone out of the Capital and, certainly, out of the country, because these recluses have taken marriage vows to their work. Anyway, that's all over, for Mr. St. Laurent has first of all, a wife, he has

three lovely daughters, all married, and two blond daughters-in-law. There's a household for you. Yes, you can say that petticoats are back in politics.

NOW, then, we put on the other Janus-face, and look forward to the big Progressive-Conservative convention here at the Coliseum on September 30, October 1 and 2. There are two, and only two, serious contenders. They are John George Diefenbaker, Prince Albert and Lake Centre, and Premier George Drew of Ontario. I do not take seriously, such well disposed dark horses as Donald Fleming of Toronto-Eglinton, or 32-year-old Edmund Davie Fulton, Kamloops. What I have seen at the Liberal convention in 1948, and what I glimpsed at the Conservative one in 1942, convinces me that no dark horse can win under our present Canadian system. The Americans may favor the sable steed in politics, but we want our man to be mounted on a white charger.

Arguments in favor of Gorgeous George are many. He is a success. He has color. He exudes confidence. He has what it takes. Perhaps the greatest argument the regular politicians advance in Drew's favor is that he can talk turkey with Maurice Duplessis, and that Monsieur Duplessis can deliver 30 seats in Quebec for him. Then there is one other argument—perhaps not important—George Drew can get the money.

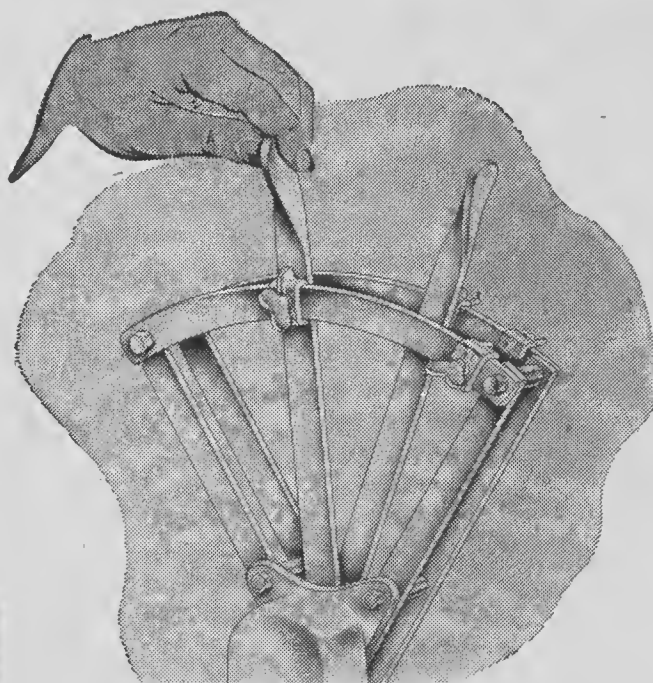
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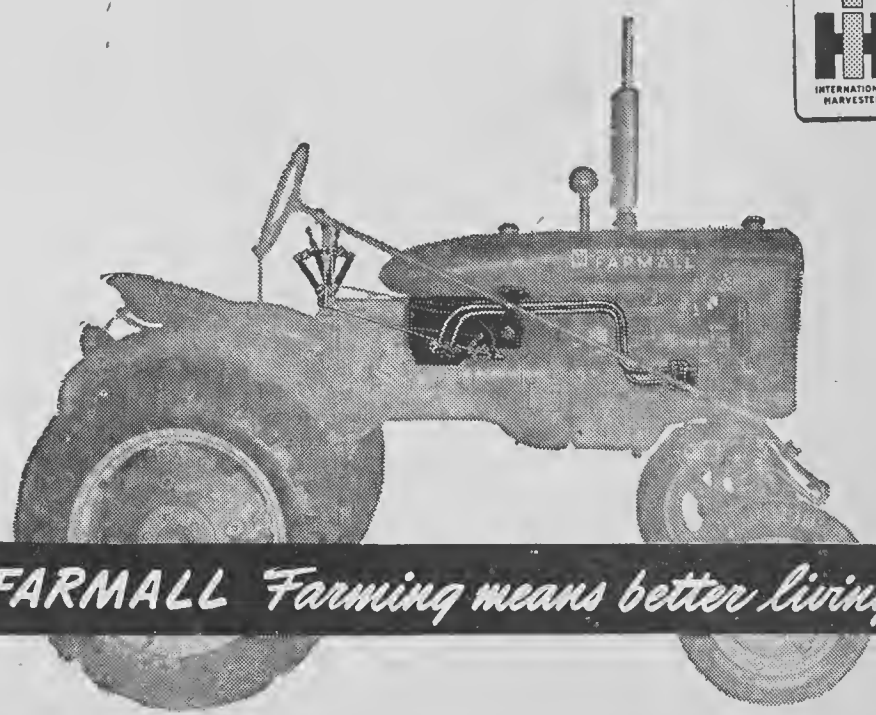
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How food protection makes jobs for Canadians

From gardens, farms, orchards, lakes and seas come vast quantities of food of every variety for use on Canadian tables. Food processors have constantly been seeking new ways to protect the purity of food. International Nickel has co-operated in this work, and has carried on a great deal of research aimed at developing better and better equipment.



So today the equipment used to handle, cook and process fruits, vegetables and soup; meat, fowl and fish, is largely made of Nickel or

Nickel alloys. These metals resist the action of food acids, do not rust or corrode, do not discolor or contaminate foods.



As a result of scientific research, processed foods are safe, pure and tasty. More and more Nickel and Nickel alloys are used for utensils, cooking vessels and other food processing equipment. The production of this Nickel provides jobs for scores of Canadians.

Thus does research develop better products, increase the use of Canadian Nickel and create more employment.

Shoring up the brick lining of a converter in the Nickel Smelting plant at Copper Cliff, Ontario.



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Canadian Nickel



CONVERTING ALKALI into Dollars!

TWENTY years ago any old-timer would have told you convincingly that alkali was nothing but a curse. On May 9 of this year the Saskatchewan government sodium sulphate plant at Chaplin shipped out its first carload of salt cake, the commercial name of the product made from alkali. The old-timer's curse has thus become the raw material for an industrial plant which will gross an income not far from \$2,000,000 annually at prevailing prices.

This conversion of alkali into cash could not have occurred a generation ago. At that time salt cake was obtained chiefly as a by-product of the Solvay process for the manufacture of hydrochloric acid. A recent edition of the Encyclopedia Britannica boldly declares, "It is a matter of some difficulty to dispose of all the salt cake now produced; more especially as it is also obtained as a by-product of the potash industry in Germany, and further occurs naturally in Canada."

That picture has been completely changed by the discovery of new uses which can absorb salt cake in prodigious quantities. The brown paper your store parcels come wrapped in is probably Kraft paper, which owes its toughness to sodium sulphate. The new detergents you may be using instead of washing soaps contain a very high

By P. M. ABEL

amount of it. In a slowly recovering world salt cake is now, and will continue to be, in active demand.

The socialist government of Hon. Tommy Douglas was not the first enterprising experimenter with sodium sulphate. The government plant at Chaplin was preceded by three privately owned ones which developed sulphate deposits at

The curse of the cow country is now being transformed into cash. A public resource developed by public funds for public benefit

Bishopric, at Palo, and at Ormiston, all in Saskatchewan. At these places shallow alkali lakes exist which dry up completely in summer, leaving a hard deposit of alkali at the bottom. The sulphate miners merely over-run the dry lake bottom with drag lines and bulldozers, removing the crust where it is thickest. Maybe they haul up some mud, or sand, or refuse, but it is good enough to find a ready market.



Plant designer and manager A. A. Holland explaining the technique of salt cake manufacture to Premier T. C. Douglas from a noisy vantage point high up in the mill

A. A. Holland, a Canadian with wide technical experience, and one of the few consulting engineers in the world who have specialized in alkali mining, conceived an entirely new technique and persuaded the Saskatchewan government to put a million dollars into a plant erected beside the immense bleak slough which stares ominously at passers-by on the Trans-Canada highway 60 miles out of Moose Jaw. Result, a plant with a capacity equal to its three contemporaries combined.

Lake Chaplin is a typical alkali slough of 18 square miles in extent. As every school boy knows, alkali only occurs in localities where evaporation is higher than rainfall. At Chaplin there is a yearly evaporation of 24 inches from an open water surface with an annual rainfall of 16 inches. A fine large saucer for collecting alkali through the ages!

Mr. Holland was aware of another scientific fact which your school boy might not know. Warm brine takes up more salt than cold brine.

When the water in an alkali slough is at its warmest summer temperature it holds the greatest amount of salt in solution. When the temperature drops to freezing the sodium sulphate in the solution crystallizes and drops down to the bottom. The most brackish slough will be relatively sweet water at the surface just before it freezes while the floor will be lined with alkali crystals. In midwinter Lake Chaplin has a floor of crystallized alkaline 16 to 24 inches thick. The total weight of that salt floor is estimated to be about 15 million tons.

NOW while Lake Chaplin dries up completely in a dry year, the salt crust is not strong enough to support the heavy drag lines as at the other Saskatchewan lakes where alkali is mined. The Chaplin salt crust, being spread over an immense area, is too thin. But Mr. Holland pondered over the fact that warm water will carry salt, and drop it on the approach of winter, and came to an important decision. He would bring the alkali in solution to the place where he wanted it dumped and let cold weather do the rest.

Accordingly he dug a canal 6,000 feet long from the centre of the lake to a suitable spot on the gently sloping margin. Here he constructed three large reservoirs, each with an area of a million square feet. From the canal a pump lifts the salt-laden brine into any one of the reservoirs at the rate of a million gallons an hour, filling them to a depth of 13 feet. Deeper than

(Turn to page 33)



One of the large reservoirs in early November when the last of the spent brine is being released.

Below: A steam shovel feeding the travelling hopper from the stock pile.



Left: At the rear of the factory 144 by 82 ft., where the raw product from the stock piles is dehydrated. The two circular bins store the salt cake awaiting shipment.





Turning her head she saw the lights of a big, high power touring car emerge from the cliff.

First instalment of a new, three-part serial—the story of a man who came to Las Palomas seeking adventure, and found it

STEADY, Tex!” Jane Keller patted her horse as she drew rein at the crest of the hill trail.

She was young and slim and straight, and her old corduroys made her look like a boy. “A mighty handsome boy,” old MacDowell always said; “ain’t any girl in these parts can touch her!”

She turned in her saddle now to watch the lights spring up in the distant ranch house, small and faint and flickering, like candles in a fog. Dusk was down in the valley, but up on the hill trail there was a yellow light behind the sycamores, and great flares of yellow and orange and red in the sunset sky. Below her lay the private road to “Las Palomas,” her brother’s ranch; it crossed the hill trail and the bridge to meet the State highroad, five miles away. There was a big cliff at the bend. Jim Keller talked of blasting it, but he had never had the time nor the men to spare; it loomed there still in the midst of trees, a rugged sentinel.

TEX put down his head and began to crop grass; it was supper time but his mistress did not stir. She was thinking, thinking hard. Then, lifting her eyes to the darkening outline of the distant cliff, she saw a sudden glow of light and, the next instant, the headlights of a big high power touring-car emerged. The girl recognized it with a start of surprise; it was Jim’s car, and Jim was not at the wheel. Urging her horse, she galloped down the trail to intercept the car before it reached the bridge. A nearer view showed her old MacDowell in it, and a stranger at the wheel. As she rode up they stopped the car.

“Mac,” she panted, “where’s Jim?”

“He’s all right; don’t you get scared, Jane,” the old man reassured her, trying to get out of the car.

Jane stopped him. “You’ve hurt your arm—what’s wrong, Mac?”

The headlights of the car illumined her as she leaned from the saddle to question him, but it left the man at the wheel in the shadow. Jane felt his eyes; they made her move uneasily and cast a quick glance at him.

“It’s this way, Jane,” the old foreman explained soberly, “Jim’s stayed behind; he’s got th’ sheriff an’ a party out. You see, we figured we’d get Jordan skewered, tight as a chicken for roasting, but somehow he broke loose—when we were gettin’ water for th’ car—you know that place near Simons’ well? We gave chase—both of us, an’ I fell an’ sprained my blamed old arm; if it hadn’t been for this young man here—he came along an’ helped me out an’ motored me back. Jim was kinder afraid Jordan might hit it back here an’ he sent me to warn th’ men. Jim’s all right, he’s got th’ whole bunch with him.”

“Jordan couldn’t get back here tonight on foot,” Jane objected.

“He’s got pals, might get a horse—or a lift in a car. Anyways, I’m here—an’ say, you oughtn’t to be up here alone,” old Mac said, in his fatherly way. “You ride along beside th’ car, if you won’t get in an’ let this young man ride Tex home.”

Jane laughed. “I’ll make it; I’ll beat you to it!”

“This young man wants work on a ranch,” Mac added, putting his well hand on the stranger’s shoulder; “this is Miss Jane Keller, the sister of the boss,” he said to his companion, impressively.

Jane caught the outline of the man’s head as he swung off his hat, but she spoke to Mac with her crisp little tone of authority.

“When you get to the ranch send him to me; I’ll see what I can do for him until Jim comes. I’m

going to take the short cut; Tex can beat any old car, Mac!”

“Jane—Miss Janel!” Mac wanted to stop her, to make her ride beside them, but she was off like a shot; they could just see the beautiful dark outline of her horse as he leaped the creek. “Ain’t that like her, bless her!” old Mac laughed in his beard. “She ain’t scared of a thing for herself—only for Jim! An’ he’d be scared stiff if he thought she was out an’ Jordan might be here!”

TELL me about this Jordan; I can’t just make it out. Cattle thief or what?” asked the young man at the wheel.

“It’s this way—take that turn, there’s Las Palomas up there—Jordan used to work here; he’s a good cattleman but he drinks like blazes, a good

many of ’em do, but he took to dope running, sellin’ it here to the cow-punchers. Jim caught him at it ’an there was a big row. Jordan, half drunk, tried to kill Jim. That settled it; he was fired. Then he took to cattle rustling an’ he’s got a gang of cut-throats along with him; maybe some of our fellers are in cahoots with th’ gang to get dope; we don’t know! He’s cleared out some of our best cattle. Yesterday he got drunk an’ came back

to brag. Jim Keller was furious; he lassoed Jordan like a steer, we tied him up an’ started. Jim was goin’ to have him jailed sure, but he got away; you came along, as you know. Well, he’ll try to get even—sure as shooting!” old Mac stopped, with an expressive shrug.

“He’s likely to kill Keller?”

MacDowell nodded. “Sure! Jane, too, if she stands in his way; he’s just as vindictive as a rattler. Get me, young man?”



The Turning Point

by MARY IMLAY TAYLOR



The younger man kept his eyes steadily on the unfamiliar road, but he uttered an exclamation of surprise. "You don't mean that the rascal would try to hurt that young girl?"

"If he thought he could get her an' hold her over Jim's head for ransom, he'd do it. Jane's in just as much danger as Jim, that's why I had to come back."

"By Jove, I wish I'd known that today—when he bolted past me—before you an' Keller came up!"

Old Mac chuckled. "Seen Jane Keller, eh? That's how all th' cowpunchers feel! Well, you know now, son, an' you've got an all-fired good chance to make good," he drawled.

"To make good!"

The words struck the other man like a blow; his face burned in the darkness, his steel-grey eyes shone strangely, but he said nothing.

"THERE'S the house, we're goin' to th' men's quarters. That there row of windows towards us—all lit up—belong to th' sickroom. One of Jim's friends was took down with pneumonia here an' they got a trained nurse an' kep' him; he's a heap better. Old Teresa says he's got a devill!" Mac added, laughing. "Kind of fine feller, name of Stenhart—Max Stenhart."

Mac heard a smothered exclamation at his side and sensed the sudden swerving of the big car.

"Strike a stone? Here, shut her off, there's one of th' men—Sandy!" MacDowell roared as the car stopped, "you come an' take th' mail in—where's Pete Rooney? He can run this car to th' garage. Here, you," he put his hand on his new driver's shoulder, "you go right up to th' house, front door there, an' see what Jane says about your stayin'—then you come to th' quarters for eats, see?"

The young man nodded, helping the old foreman to climb down; then he heard MacDowell telling them about Jordan's escape.

"Get your guns handy, boys," he sang out. "You know that snake; he'll be after the yearlings again—he may get here any time!"

The newcomer did not listen to the rest of it; he turned away into the darkness and made a feint

of going directly to the house. Half way he stood still; the lights from the windows flowed across the short turf in long pools of radiance, reaching nearly to his feet. He caught the sound of dishes in the kitchen, and an open door gave him a glimpse of the Chinese cook busy at his task. In the distance somewhere a man was singing lustily in Spanish; far off he heard the scarcely distinguishable sounds of cattle in the corrals. He moved swiftly under the lighted windows, trying to count them, then, suddenly, he heard Stenhart's voice. After all these years he knew it instantly, and his hands clenched at his sides until the nails bit deep into the flesh. Something tightened his throat, he could scarcely breathe. Then came a feeling of savage triumph; he had won out, he was here and Stenhart was here!

Slowly and cautiously, he took a step nearer; he was in the deep shadow of the house and the window ledge was on a level with his eyes.

There was no curtain, and he had a clear view of the low-ceiled room. A trained nurse stood at a table beside the bed, dropping some medicine slowly into a glass, and the lamplight was focused on her white uniform; but beyond her, in the shadowed four-poster, lay the invalid. He had raised himself on his elbow and was talking to her, a slight flush deepening the color of his handsome face. The man at the window caught the sharp, clean outline of his profile, the fevered brilliance of his dark eyes, the hollows in his cheeks. There was a look of mental conflict, of unrest.

"It's bitten in," the outsider thought, with a kind of bitter satisfaction; "after all, it's bitten in!"

Then something, the daredevil in him, made him lean forward and speak slowly, distinctly, loudly, one word:

"Sherwin!"

Stenhart heard it. He sprang up in bed with a cry, his hands shaking at his throat, his eyes staring at the darkness of the window. His tormenter, seeing it, laughed grimly, but he saw the nurse turn and come toward him. She must not find him there! Softly, swiftly, he dropped back into the night and made his way to the front door.

"MACDOWELL has just 'phoned from the garage how kind you were when he sprained his arm, and I want to thank you. We, my brother and I, both think a lot of old Mac!"

The girl had risen from her seat at Jim's old desk as she spoke, and she faced him. He saw the fine curve of her chin and throat, and the black-lashed blue eyes. She was an upstanding girl; she could run the ranch alone in Jim's absence. The men all looked up to her, held her in high esteem.

The newcomer did not speak and she went on quickly: "Mac says you'd like something to do about the ranch and we need men, anyway. What—" she smiled frankly—"please tell me what you can do best?"

The man reddened. Of course he had to expect something like this, but he was not one to whom falsehood came easily, and to lie to a fine, frank girl like this! But, after all, it wasn't altogether a lie!

"My last job was book-keeping," he said, and then, as he saw the swift change in her expression, he added; "not just the thing for a ranch, I'm afraid, but if I can turn my hand to something out-of-doors, I'd like it."

"You're from the East?" her blue eyes considered him gravely, impersonally, and then she smiled. "I'm not sure but that you're a godsend! I've been trying to straighten up Jim's accounts and it's perfectly hopeless, he's so splashy with ink and so bad at figures! I'd be glad if you'd try your hand at these tomorrow." As she spoke she swept a bunch of dog-eared old books with her fingers.

HE came nearer and began to turn them over, snatching at this strange opportunity to get into the house, the house where Stenhart was! He ran his index finger along under the name—written in Jim Keller's big sprawling handwriting.

"*'El Rancho de las Palomas'*—you cling to the Spanish down here, eh?"

She laughed. "*'Las Palomas'* sounds so much better than just plain English. Besides, there used to be many doves here—there are still. Can you untangle those figures, do you think?"

"Surely I can—they're quite simple."

"Simple? I was all snarled up!" she laughed softly again. "Then you'll do this until Jim comes? I—" she hesitated, blushing unaccountably; "I can't make any terms—of course you understand that?"

My brother's the boss, but if you can wait—"

"Oh, that's all right, you'll be feeding and lodging me, you see!" For the first time, he laughed and his face lighted up. "Money isn't the only thing I came West for!"

The girl gave him a quick, questioning glance, but his face was in the shadow and she made nothing of it.

"Oh, I know—adventure!" she said, watching him.

He nodded grimly. "The great adventure!" he said, in an odd tone.

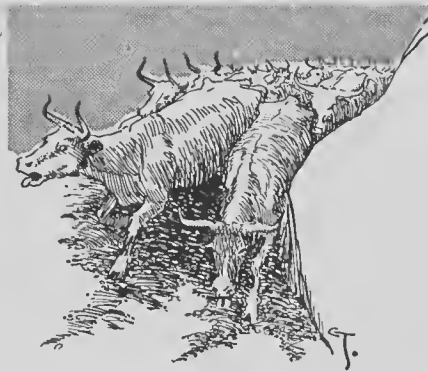
Her blue eyes widened. Another question was on her lips, but a door opened suddenly and the trained nurse came down the long corridor toward them.

Jane turned quickly. "Anything wrong, Fanny?" The nurse shook her head. "He's gaining all the time."

"Fine!" Jane turned in an explanatory way to the stranger: "A friend of my brother's, Mr. Stenhart, was taken suddenly ill with pneumonia here; we couldn't let him be moved and he's been having a hard time. Miss Sewell, this is the friend in need who helped old Mac. Mr.—?" she looked around. "Actually, I don't know your name!"

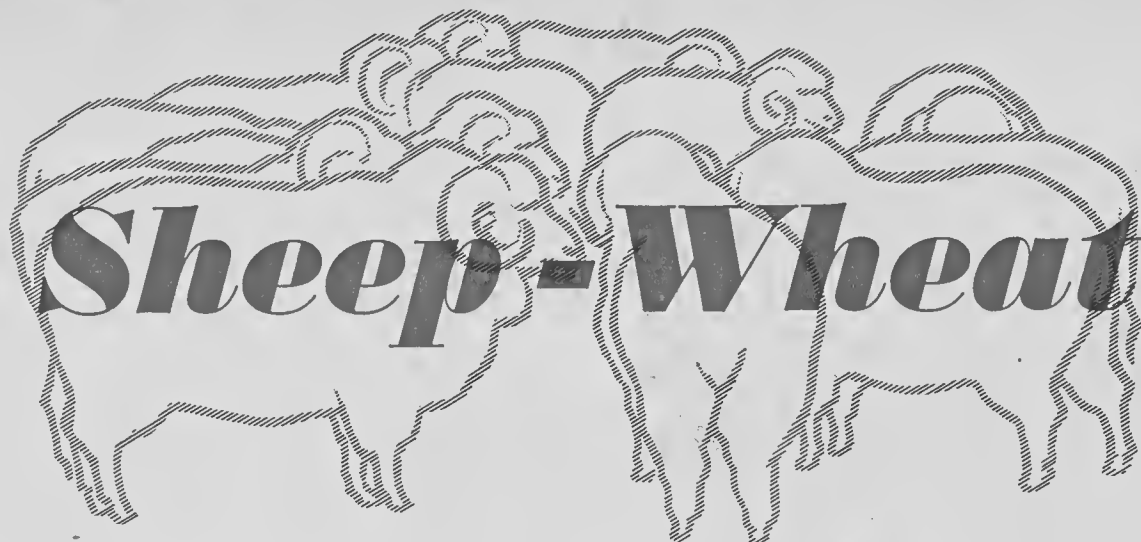
"John—" he began, and stopped, momentarily confused.

(Turn to page 54)



Illustrated by Clarence Tillenius

AUSTRALIA'S



ECONOMY

by L. B. THOMSON

of table grapes, and 83,000 tons of raisins, sultanas and currants. Apples and stone fruits are grown extensively for export, and in addition, the canning of all fruits occupies an important place in the economy. Tasmania is the apple state, producing more than 50 per cent of the Australian crop. Australia is an empire of many primary products that find their way to all parts of the world.

THE sheep-wheat economy is most interesting to a western Canadian. For many years sheep and wheat production have been developed to meet the exigencies of climate and to build a permanent agriculture. It is only in more favored rainfall areas that wheat is grown as the one crop on the farm. The sheep-wheat farm varies in size, but it is common to see farms cropping 500 acres of wheat and running 2,000-3,000 sheep on adjoining pasture land. As soon as the crop is harvested the sheep are grazed on the stubble at the rate of two sheep per acre. The crop is combined just below the heads and if there is any of the wheat missed or scattered on the ground, the farmer doesn't worry much because the sheep will pick up every kernel. The returns from sheep are just as good if not better than wheat. On many farms wheat is the secondary crop. As soon as the stubble is well grazed the sheep return to grazing or browsing on the range. When the later season rains come annual grasses appear naturally in the stubble crop and they are quite valuable pastures. This field may be left in pasture for several years and other pasture

The Australian farmer has to contend with devastating droughts that cause severe livestock losses. He has met his problem with a very carefully considered water development program.

lands of similar previous treatment are plowed up for wheat production. The farm unit for crop land varies greatly but 2,000 acres of land is quite common where only 500 acres are in crop each year.

When prolonged dry seasons occur they present many problems to this class of farmer. When feed and pasture are short, they resort to cutting branches of trees for feed, which provide a livable ration. During 1944-1945 the prolonged drought became a national tragedy and immense losses of sheep and cattle occurred.

The farmer had to meet insurmountable problems,

and even with state aid it was not possible to maintain alive 20 per cent of their livestock inventory. As a result, the farmer today is quite conscious of the necessity for conservation of feed. The writer was on many farms in these areas where large stocks of feed are conserved for drought emergency. This practice is not universal by any means, but all state governments are urging its prosecution to the fullest extent. The lack of water for livestock during drought enhances the problem greatly but this phase will be referred to later.

AUSTRALIA'S sheep industry is one of amazing progress. The writer had the unique experience of visiting many large sheep stations (ranches). First of all, the writer must pay tribute to the purebred Merino breeders of Australia and particularly in the state of New South Wales.

The reader will no doubt picture a wrinkly, close wooled, small sheep that was the case several hundred years ago in Spain. It is a vastly different picture today. Through a hundred years of constructive breeding by the purebred breeder and his experience handed down from generation to generation, the Merino sheep today in Australia is an example to all other livestock breeders in what continuity in breeding for a purpose can accomplish in adaptability.

The Merinos have good conformation with deep chests, not too broad, easy movers, and well filled hindquarters. They are made to use the country and fit the needs of the commercial sheep man in a land use plan. There is no wool around the heads and the feet are free from locks. The wool is characterized by excellent quality, bright and clear, with no sacrifice for fineness. The density of the fleeces is extraordinary which is indicated in the 30-pound fleece weights from purebred yearling rams. The purebred ewes are characterized by the

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A pastoral scene in New South Wales.



Figs drying in the sun prior to packing.

Future Farmers

AT WORK AND PLAY

by RALPH HEDLIN

AS the agricultural industry of any area grows older, it tends to become more complex. Farmers find that they must be well informed on subjects as diverse as tariff legislation and combination of enterprises in order to maintain their position in the political and economic framework of society. Soil deteriorates and the men who take their living from it must conserve and improve it. The food a nation eats is of first importance to the whole nation, and society as a whole has a stake in better farm practices.

In 1913 the province of Saskatchewan initiated a three-year Associate course in agriculture. It was designed to meet the needs of young men who planned to make farming their life work. Courses were given in field husbandry, agricultural engineering, animal husbandry, veterinary science, natural history and elementary science, English and arithmetic and farm accounts. By 1916 the enrollment had reached 76, by 1919 it was 157, and 1929 saw 187 students enrolled in the course. The depression dealt the course a heavy blow. In 1932-1933 only five students were registered; the next year this climbed to nine, the year after it rose to 16 and in 1935-1936 and 1936-1937 it hung around the 40 mark. Since that time, with the exception of three years, it

has been over 100, on three occasions exceeding 200.

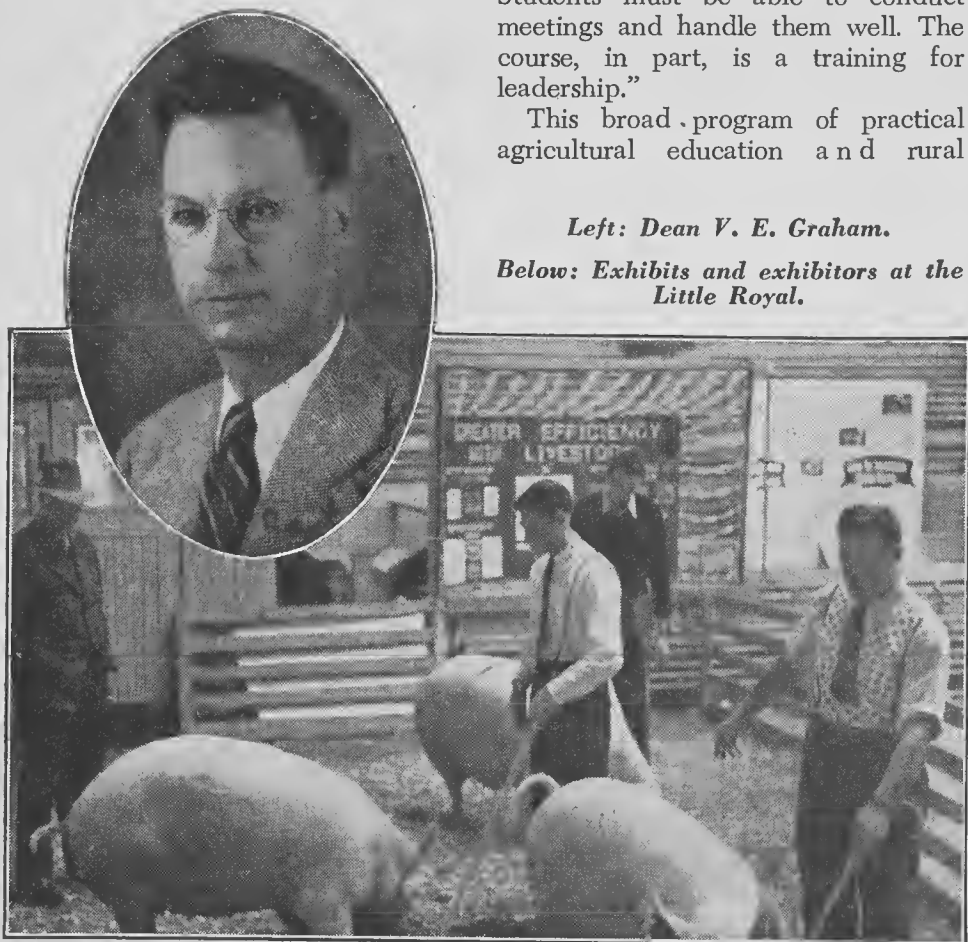
The three-year Associate course was revised in 1937 and made into a two-year School of Agriculture. Under the new arrangement, farm young people came in for a five-month period for two winters, at the end of which they received a diploma, indicating they had satisfactorily completed the course. This arrangement has persisted to the present time.

THE School of Agriculture is an integral part of the College of Agriculture. The faculty of the college instruct the students who seek a degree in the science of agriculture and also those who are taking the two-year diploma course. The school has a full-time director in the person of W. B. Baker. Dr. V. E. Graham is Dean of the College of Agriculture and of the School. The four-year degree course is intended to train research men and technical agriculturalists. "The two-year diploma course of the School of Agriculture is intended to train people who are going back to the farm," says Dean Graham. "They are trained to be good farmers and community leaders. Our purpose in the college is to train technical agriculturalists. In the school we stress public speaking and the conducting of meetings. Students must be able to conduct meetings and handle them well. The course, in part, is a training for leadership."

This broad program of practical agricultural education and rural

Left: Dean V. E. Graham.

Below: Exhibits and exhibitors at the Little Royal.



Top: One of the school hockey teams ready to do battle.

Right: Vic Draftenza of Ebenezer, Sask., second year student, tells the boys some facts in a debate.



leadership training calls for a carefully administered course of study and work. The students arrive at the University in late October. The first-year students take classes in farm motors, farm machinery, farm management, livestock feeding, crop production, farm gardening, beekeeping, farm dairying, poultry, public speaking, business English and community life. In the second year, the students take courses in field crops, animal breeding, farm buildings, farm shopwork, parliamentary procedure, farm bookkeeping, veterinary science, rural leadership, insect pests, plant diseases, business English and soil management. The second year is a carry-on from the first, but Mr. Baker

Saskatchewan's School of Agriculture gives training in practical farming and rural leadership

makes it clear that any farmer will derive a great deal of benefit even if only one year is taken.

Bill Baker, the director, points out that this is no stereotyped course that is over when the graduate picks up his diploma. Eighty-five per cent of the men who complete the course go back to the farm, and before they go it has been drilled into them that they have a real responsibility in their home districts. They are encouraged to take part in all forms of activity that might improve farm living, and many have been active in all aspects of junior club work, community projects, agricultural farms, co-operatives, politics and almost all facets of farm life. There are an increasing number who do not have the capital, or family connections, to get a start in farming. In such cases the administration makes every effort to get the graduate a job in some field intimately related to the agricultural industry.

IT is felt that if the graduates are to take their places as leaders in their home districts, that the University training must be broader than straight classroom instruction. "Learn by doing," is one of the guiding principles of the whole course. The students "learn by doing" in comprehensive

practical work in laboratories, associated with the classroom instruction. Merv Johnson, a public speaking instructor in the winter and a farmer in the summer, may lecture for an hour on the principles of good public speaking, and for the next two hours the young farmer students will give short speeches to gain confidence and to test the theories advanced. A lecturer may give the theory of diesel engine operation and later the students will be seen working over a diesel engine. All theory is translated into practical action programs.

Steps were taken this spring to improve the basis of training by the introduction of summer projects. On completion of the first year, a student is assigned a project of research, and during the summer months on the farm, before starting the second year, the research must be completed. Projects this year include such widely diverse subjects as late seeding of barley for wild oats control, collection, identification and mounting of weed seeds and plants, fertilizer testing, rural community surveying, farm buildings survey in the home district, detailed records on per acre costs of tractor and combine operation, and workshop projects. The summer projects are designed to make the students apply their theory in a practical way.

Mr. Baker suggests that perhaps the most valuable training outside the classroom is gained in the students' own society—the Saskatchewan Vocational Agriculturalists' Association. All of the students in the school belong to this association. They elect their own executive, consisting of president, vice-president, secretary-treasurer, and a number of directors. The Association

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On a great flat rock behind the war drummers, knife in one hand, tomahawk in the other, stood Don Marrigan.

MAN OF Song

by KERRY WOOD

*So the Indians called him and he proved
his power among their young men*

Illustrated by Clarence Tillerius

so's he could hear it too. An' none of us, the Indian chief nor Slim nor the cook nor me thought it was much of a show of singin'. Don Marrigan can do better'n that. They should 'a give him his head an' then he'd show 'em singin' that'll make them lay back an' listen. That is, he will if Miss Iola Van Roche lets him.

Yeah. She's the artist girl. If you want my opinion, she's cracked four ways from Sunday. Uh-huh. But by the saddle-horn o' Samson, she's pretty! Girls don't get made no prettier. No-sir!

ALL right, Mister. Sit tight. I don't care if you did hear him yourself and all. I still say them op'ra-going folks an' the radio listeners didn't get nothin' for their tickets. You should 'a heard him up here in the mountains, back in the White Smokies. That was music!

First I knew of Don, he come ridin' up to the corral out there an' asked to see Clem Eversole.

"That's me," I says.

"You the boss o' this lay-out?" he asks.

"That's me again," I says.

"Well," sez he. "How about a job?"

He was a nice lookin' kid, though kinda dreamy in the face. Them papers call him an A-don-is, whatever that means.

But he was foo-fawed up when he come here. A white sombrero, a green silk shirt, brass-studded calfskin chaps, and fancy scrolled boots with jingle spurs.

"What experience you got?" I enquires.

"I bin ridin' the stampedes," he answers.

Now, a rodeo cowboy is no good for actual workin'. I used to raise cattle down on the prairie before I got holt of this dude-ranch idea, so I know that a foo-fawed stampede dandy is not a workin' model. But when Marrigan asks for a job, I'm runnin' a dude game and not a beef spread, else I wouldn't have looked at him serious. Tourist people like fancy stuff, y'see, and this Don Marrigan had a good lookin' face and a spark to his black eyes. I even saw a fifty-year-old lady in well-filled britches, a-sittin' on the top corral log at the time, get out her pocket kit an'

give herself a quick go-over after she'd taken a double glance at this young buck. So I said:

"I'll give you a try. The bunk-house is over yonder. Ask for Slim Bates, the foreman."

Huh?

"Oh, no. He was no good for workin'. I knew that before I hired him. But all I needed was a fancy-dressed young squirt to ride herd on the lady dudes; I figgered Marrigan would please 'em, which he did. Wasn't no good at loadin' the pack-ponies nor slingin' the Diamond, nor raisin' the teepee tents, nor peggin' out a bough bed or stirrin' up a mess o' stew and 'dough-gods, 'cause all them things require a bit of honest sweat, which was outta his line. Still, I will say for him that he had a knack with horses. Maybe that was in his blood. His father was an Irish sailor, but his mother was a Spanish gypsy and I hear tell them gypsy folk know horses good as any.

How he come to stray away out west to my dude-ranch hard against the White Smoky range o' the Rockies is more'n I ever found out. This is wild country, Mister. Look out that window there an' you c'n see a ten-mile spread o' spruce and jack-pine that's never known an axe blade. Look west, an' you see peaks that ain't been climbed yet. You saw the grizzly at the garbage hole this mornin', and you seen that noble-steppin' herd o' elk pass through the corral pasture last evenin'. Them animals ain't park tamed; they're wild, just like all the critters in the woods and hills back here. And by critters, I include the Indians.

DON'T laugh, Mister. You're used to the Reserve Indian, who's become a scrub farmer kind of guy who does a bit of horse tradin' on the side an' maybe keeps a few fancy feathers to wear at the summer fairs at so much per day. Out here it's different. These mountain men under Charley Red Bear away up here in this odd corner o' Canada, they are the real Indian. Yes-sir.

Oh, you needn't look scared an' go tell your wimminfolks. There's no call to worry. What I'm sayin' is that these Niches ain't changed over yet to what white folks is used to in the way of Indians. F'r instance, they don't take treaty from the guyment. They're independent, an' they don't want no

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I SEE by the papers that the music folk down at Noo York went wild over young Don Marrigan's singing. They say it's rich and powerful and full o' somethin' they call dramatics. Lookut this here headline:

NEW BARITONE GREATEST VOICE DISCOVERY IN YEARS.

Sure! They even praise up that crazy but fancy looking Miss Iola Van Roche, her what discovered him. Huh! She did a lot more than just plain discover, I can tell you; she saved his beautiful neck and no funny foolin'!

But about Don Marrigan's singing. I heard him myself. I tuned in our ranch radio on all that flighty la-da doings just so's I could flap an ear on his songs for old time's sake. An' it wasn't worth the bother! Them folks at Noo York didn't hear nothin' at all. Now wait—I ain't talking small just to be big. I know Marrigan personal, see, an' I know what he c'n do. That's why I say they didn't hear nothin'.

'Course, it was mainly their own

faults. Op'ra, they calls it. Don Marrigan had one o' the lead jobs and sang in a furrin language a body couldn't fathom no-how. Not that you got to understand what's bein' said in words to 'know what the music says; Don showed us that, plain as plain. But this op'ra thing was light-head stuff. There was a bunch o' fillies screechin' up high all het up and excited, and a fat fellow with a belly was being a tenor all over everythin', then Don himself. He was singin' clear and strong, but you could tell he hadn't got the feel of it. He was just wrestlin' with strange words, that's all. Huh?

SURE he's got a voice. Sure he knocked 'em sideways an' hog-tied the cinches. I saw it all in the papers and them music critics let him have a glad hurrah with every fancy word in the book. But I heard him myself right here where I'm a-sittin' now. So did Slim Bates, my top wrangler for the C-Bar. So did Legs Eddy, our cook. Why shucks! We even brung in Charley Red Bear from the hills

METHODS of rat control have been studied by men for years and, in some cases, by men who have devoted their entire lives to the subject. Consequently, countless preparations, contrivances and devices have been brought before the public.

Snaring, trailing, trapping, flooding, digging, ferreting, hunting, fumigating and poisoning, all have been employed. Rat lures, rat repellents, rat limes and bacterial viruses have been resorted to; even antirat laws have been passed in an effort to win the battle against the advance of this rodent. While these have been instrumental in checking and destroying rats, none has succeeded in accomplishing the end desired, that is, to reduce materially the total number of rats found around a great many farms today.

AT last, however, rat proofing is making definite headway against mankind's age-old enemy, promising that upon this method will rest the final solution of the control of the rat. This article, therefore, while dealing primarily with the rat proofing of farm buildings and how it may be done, will also touch on the destruction which can be caused through these rodents, in the belief that if the farmer has a broader knowledge of this and the diseases carried by rats, he will more willingly put forth an effort to cope with their control.

Like all other animals, rats thrive best where there is an abundance of food combined with the proper shelter. The removal of these means a step towards permanent rat control. Rat populations on premises and the extent of damage they do are usually in direct proportion to the shelter and the available food supply afforded them. Based on this decision then, rat proofing not only means cutting off their source of food supply but also eliminating them from their hiding and nesting places.

Frequently it will be found that rats gain access to buildings through open doors and ground windows, but if rat proofing has become a regular practice the animals will not stay long where they cannot find dark retreats and food. The farmer who includes rat proofing as a regular program will find the exclusion of rats comparatively easy.

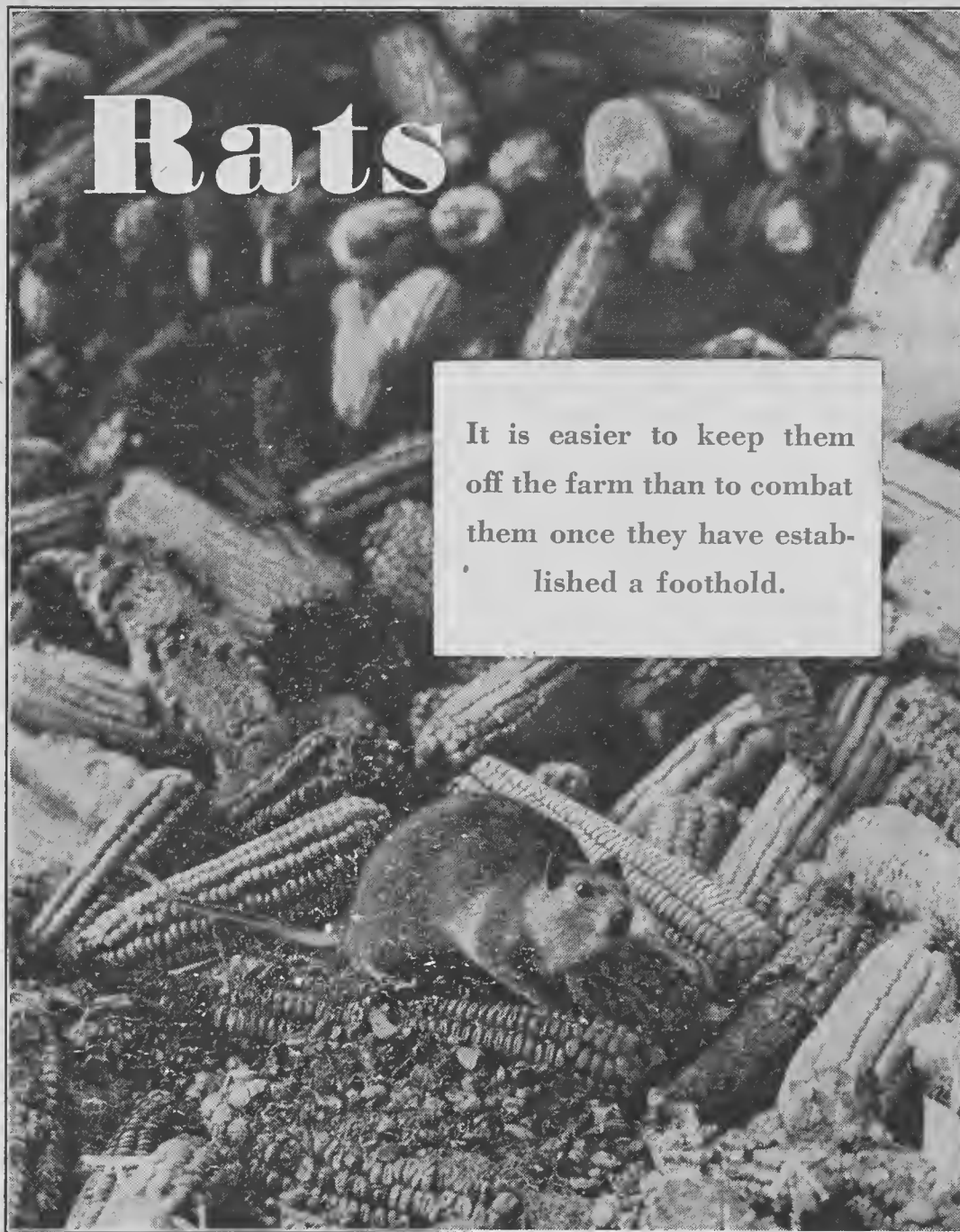
Under some circumstances rat proofing is not practicable or possible. In such cases it will always be necessary to use methods of destruction as a means of keeping rats under control. Information on how this may be successfully carried out will be given later in this article. However, as already pointed out, rat proofing offers the best means towards permanent freedom from rats, and with this thought foremost in mind every farmer should make a sincere effort in the fight against this destructive pest.

AS rats are migratory animals, moving readily from one farm to another, it will prove advantageous for farmers to form anti-rat organizations in their community. Thus, under such a system rats will not be driven from one farm where food and shelter has been cut off to take up residence in even greater numbers on adjoining farms. Under organized group drives rats are destroyed in much greater numbers.

Rats are responsible for many of the diseases occurring among livestock. Some veterinarians claim that stock fatalities are much more prevalent on farms harboring rats. Some diseases contracted

Rats

It is easier to keep them off the farm than to combat them once they have established a foothold.



night and several through the day your farm is harboring from one thousand to five thousand of the animals.

The first step towards the rat proofing of any farm is cleaning away the rubbish. This includes old hay stacks, straw bottoms, and heaps of trash. These places not only offer concealment for rats but, if near buildings, act as possible fire hazards as well. Piles of discarded machinery grown up with grass, weed patches near granaries, chicken pens and feedlots should be cleared away. Left-over silo bottoms should be removed before the next season's crop is stored. Manure piles left undisturbed for long periods become ideal rat harbors. Lumber and fence posts should not be left lying on the ground but should be piled on racks a foot or more in height.

ON a great many farms the loss occasioned by rats in one year amounts to more than what the cost would be of rat proofing the entire premises. In no other place is rat proofing more necessary and less often accomplished than on the farm. It will be noted that the farms which have been rat proofed are nearly always the most prosperous. The answer here lies in the fact that the farmer has learned the value of plugging small leaks which quickly add to operating costs.

Good building principles and rat proofing go together. As concrete foundations are one of the fundamentals of good building construction, they are also considered the best means of excluding the rat. For adequate rat proofing, foundations should extend into the ground for a depth of at least two feet. A foot or more is considered ample for the foundation to protrude above the level. This eliminates the chance of rats gnawing holes through the siding, which would happen if the lower walls of the building were in close contact with the ground.

Floors should be at least four inches thick. Five or six inches is recommended if they are to be used for the storing or the passing of heavy vehicles. Barns with wooden floors and mangers should have these replaced with concrete. The mangers should be constructed a foot or more off the floor with a concrete base. At no time should weak concrete be used as this offers but little resistance to the sharp incisors of the rat.

AIR spaces between ceilings, floors, double walls, boxed-in-piping and staircases, or any other similar places must be eliminated or so effectively sealed that rats are unable to find an entrance. All ventilation intakes should be covered with half-inch mesh hardware cloth. In rat proofing, any measures taken which will prevent rats from reaching a source of food supply will discourage the animals from making your farm a permanent residence.

In recent years the practice has been followed of lining the interiors of many farm buildings with fibrous insulating materials. This has resulted in greater rat infestation. In fact, rats find it so easy to cut through this type of composition that they seem to be attracted to the better breeding facilities it provides. If filling the hollow space above the sill to a height of eight or ten inches with cement, bricks or other material resistant to the gnawing of rats is not practical, a one or two-foot strip of metal may be fastened around the inside wall from the floor up.

It is most important that grain bins and other
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by domestic livestock which can be attributed directly to these rodents are ringworm, white scour in calves, contagious abortion (Bangs disease), joint ill in foals, mastitis, abortion in mares, tuberculosis, and trichinosis in hogs. No stock raiser should hazard the risk of losing valuable livestock through disease transmitted by rats when destroying the rodents would greatly reduce the possibility.

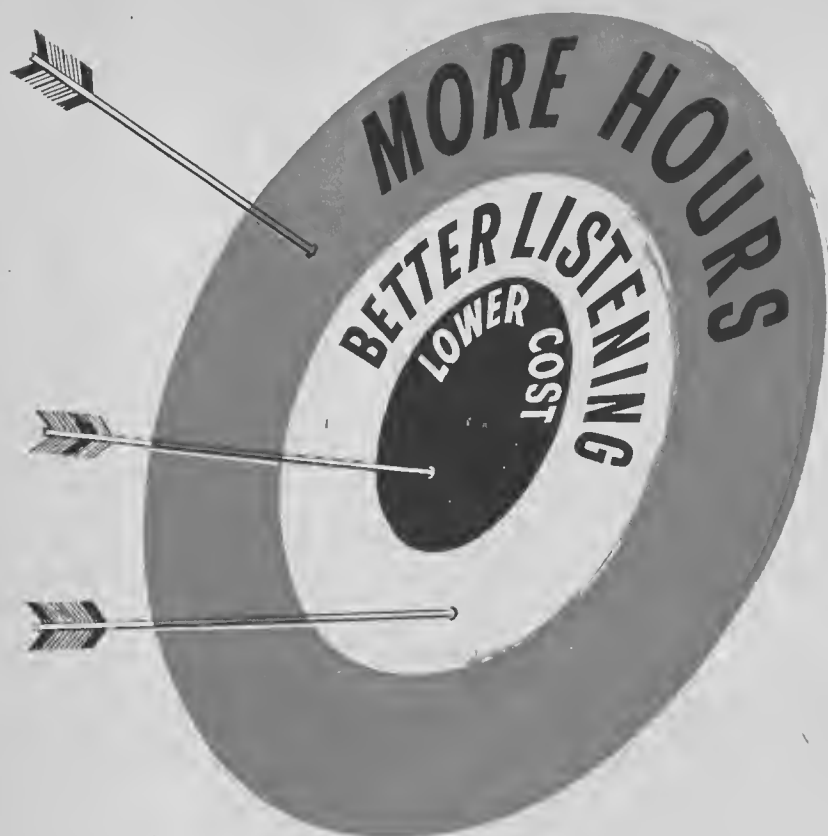
AS rats are known to eat and destroy considerable quantities of grain the thrifty farmer will be interested in knowing just how much it is costing him to maintain his rat population. It is an established fact that one rat will consume about fifty pounds of grain or its equivalent during the period of one year. In addition to what it will eat it destroys another hundred pounds. By reducing pounds to bushels and consulting the present price of grain it will be quickly seen what it is costing to feed one rat for one year.

It must be remembered that the above illustration does not consider the damage done to property or the possible killing of certain types of livestock. Full-grown rats are capable of consuming large quantities of eggs as well as killing small chickens, young lambs, suckling pigs and full-grown ducks and hens.

Harold Gunderson, of Iowa State College, has devised a plan for estimating rat populations. It is given here for the benefit of the reader:

When rat signs are visible but the animals are never seen, from one to a hundred rats are around. If they are not noticed through the day, but are seen occasionally at night, from one hundred to five hundred of the pests make up the population. If they are seen every night but seldom through the day the total will range between five hundred and one thousand. If great numbers are observed at

by C. P. BARAGER



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Domestic Wrangle Over The Fraser

Power interests and the fishing industry have conflicting aims

by CHAS. L. SHAW

ALIVELY contest for the resources of British Columbia's Fraser River appears to be shaping up, and it may provide the most contentious issue before the province during the next decade.

On one side are the power interests who visualize a series of dams and hydro-electric plants along the vast length of the Fraser. They look forward to the day when industrialization of the province will be greatly stimulated by an abundance of cheap power from this river, and they are keenly aware of the fact that British Columbia possesses more potential waterpower than any other province in Canada, and that most of this is locked up in the mighty Fraser.

On the other side are ranged the fisheries interests—several thousand commercial fishermen, salmon packers and fish scientists and conservationists. They see in the Fraser one of the

in the narrow gorge apparently did the trick.

The whole story of the Fraser river sockeye is much too long and complicated to tell here, but it may be mentioned that the salmon return to the river from the open ocean at stated intervals for spawning, the sockeye every fourth year, in each instance the migrating salmon returning to the identical stream where they were first hatched. This year happens to be the year when the sockeye return to the Chilko streams and lakes which feed the Fraser in the Chilcotin country. It is estimated that the proportion of the year's salmon run that is caught and packed will be worth at least \$6,000,000.

The fishermen and the conservationists contend that this can be steadily increased over the years because the industry is just beginning to feel the beneficial effects of the fish-



Boys' and girls' clubs in the Maritimes go in for fur farming projects. Two members, the Scott girls of Janeville, N.B., are seen here chopping fish for their charges with the approval of the family cat and dog. The taller girl is holding a pet mink.

world's great breeding grounds of salmon and the possible source of upwards of \$50,000,000 annually in revenue from canned fish sold in markets everywhere.

The fisheries people have had the argument pretty much to themselves in the past. There are no power projects today on the Fraser, except on a few minor tributaries, none of which affects the fish resources of the river basin. The Fraser has been famous for its sockeye salmon ever since the early days of British Columbia when hundreds of sailboats gathered at the river mouth every year and caught a seemingly inexhaustible horde of salmon which were subsequently processed and packed by a score of canneries.

Rockslides at Hell's Gate on the Fraser 35 years ago when the Canadian Northern Railway was being built through the canyon all but ruined the fishery, but as a result of the patient and extremely capable work of an international commission the sockeye have been coming back in increasing numbers. The fishway built at Hell's Gate by the commission to help the fish ascend the turbulent river

ways which were constructed only three years ago.

All this is by way of underscoring the significance of the survey now being made by power interests in the Chilko area of the Fraser. Aluminum manufacturing interests are spending \$100,000 to test the feasibility of driving a tunnel that will spill the outflow from Chilko Lake and river into the ocean at Bute Inlet, thus diverting it from the Fraser.

If the project is worth while from the engineering and industrial standpoint, British Columbia will no doubt get a big aluminum plant. But if this program is proceeded with, declare the salmon conservationists, the Chilko will be doomed as a spawning area and the fishery will be greatly curtailed. The dream of the fisheries men of a huge \$50,000,000 packing industry will be blasted.

The inevitable clash is obvious, but there may be a way of composing the differences of the two factions, and the government is exploring every avenue of reconciliation. The salmon men point out that, after all, there are other sources of power besides the

Chilko which would not affect the fisheries. But in these days there is a growing tendency on the part of governments and general industry to become power-minded. The fisheries people know they are in for a fight.

The farming community along the Fraser is naturally concerned with the outcome of the argument. The farmers are interested in cheap power and electrification and flood control, all of which would be provided by dams and new power stations. They realize, however, that such things would not necessarily be provided by a single big power project built for the use of one industry, and for that reason in the potential fight between the power interests and the fishermen the farmers are in a neutral corner.

What the farmers want more than anything, so far as the Fraser is concerned, is a long-term program designed to give adequate flood control and irrigation, coupled more or less incidentally with power dams that could be hooked up with rural transmission lines and thus reduce the cost of farm mechanization.

THIS is usually the season when the fruit growers of the Okanagan are wondering how they will get enough boxes for their apples and enough labor to handle the harvesting and the packing. But this summer, strange to relate, most of these problems appear to offer little anxiety. The crops seem reasonably good, and so does the supply of labor and containers.

The apple harvest will probably total more than 8,200,000 boxes, which is considerably more than last season although nearly 1,500,000 boxes short of the 1946 record-breaker. However, in view of the market situation this is no cause for worry. The United Kingdom market must apparently be written off this year owing to dollar shortage, but in the markets that are open to B.C. apples there is a good demand and prices should be satisfactory.

One group in British Columbia indirectly affiliated with the farmer is represented by the grain shippers, and they are somewhat upset by the low volume of wheat shipments routed through Pacific ports.

During the crop season just ended only 36,000,000 bushels of wheat moved through British Columbia for export, practically all of it through Vancouver elevators. This is clearly a disappointing traffic inasmuch as during the previous two seasons the average was close to double that figure, and there have been years when as much as 100,000,000 bushels were put through the Pacific outlet. The Vancouver shippers feel that an excessive amount of prairie grain was transported via the Lakehead to eastern ports, and they don't like it.

With transpacific shipping still dislocated by the effects of the war, which all but destroyed Japanese and Chinese overseas trade, British Columbia's important shipping industry is looking for every possible means of stimulating the flow of commerce through the ports of the Pacific.

From Baron van Haersolte, of Rotterdam, British Columbia has learned that many young Dutch bulb growers are anxious to emigrate to Canada and that British Columbia, already becoming famous for its bulb culture, should offer them a genuine opportunity.

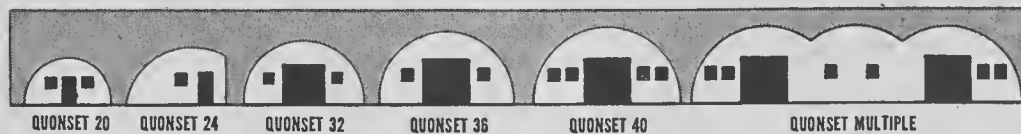
Cows OR Chickens ARE EQUALLY "AT HOME" IN A Quonset*

The practical value of handling herds under the "loose housing" system can now be attested by the British Columbia Provincial Government, as a result of its operations at Colony Farm, Essondale. There, three Quonset 40's, each 160 feet long, are successfully used as loafing barns for the celebrated herd of 228 registered Holsteins. The Quonsets are set on concrete foundations and have cinder floors topped with a deep layer of wood shavings. Plans for the future include the use of a Quonset 24 for a grain feeding barn. Colony Farm managers suggest that the use of Quonset buildings for loafing barns is worth the consideration of private dairymen with large herds.



When it was decided to modernize the "chicken department" at Spring Hill Farm, Brighton, Michigan, a Quonset 20, in a 108-foot length, was erected on a concrete floor-foundation. In the center a 12-foot section, reached through a direct side entrance, houses feed bins, hot water and space heaters, egg candler and cooler. On each side of this utility room are two poultry rooms, or pens, each 24 feet in length. The building is insulated and inner-lined with corrugated steel sheathing; it is force-ventilated in summer. Mr. James Cowie, manager, claims that the greatest of many advantages is the ease with which his Quonset poultry house is cleaned, and kept clean.

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NEWS of AGRICULTURE

Farm Improvement Loans

FARMERS are going to the Farm Improvement Loans Act for a lot of their credit. In 1947 loans were made to 22,046 farmers for a total volume of \$18,160,821. This is an increase of \$9 million over last year's total of loans.

Eighty-three per cent of all the loans made in 1947 were for the purchase of farm implements. Thirty per cent of all tractors and combines sold in Canada were financed under the act.

Over one and a half million dollars were borrowed for farm building in 1947, of which 22 per cent was for new farm homes. There were 387 loans for their erection, for a total of \$488,000. Almost twice this amount was borrowed for the construction of new barns, sheds, granaries and similar farm-utility buildings.

One of the primary objectives of the act is to make available funds for the development of new agricultural areas. In 1947, 1,356 farmers borrowed \$522,344 for financing the clearing and breaking of new land. As a result of the loans 68,693 acres of new land were brought under cultivation. Since the inception of the act loans have been made that have made possible the bringing of a total of 123,860 acres of new land under cultivation.

Science Saves Labor

AT the U.S. Plant Industry Station at Beltsville, Maryland, a promising shortcut has been discovered which may make it feasible to combine a weed killer, a fertilizer, and a fungicide spray for diseases of grass, in one operation.

The weed spray, 2,4-D, the nitrogen fertilizer urea and the fungicide Fermate were experimented with. It had been found that 2,4-D, strong enough to kill weeds, lessened the rate of growth of a mixture of Kentucky blue grass, fescue and red top.

By applying 60 pounds of urea to the acre, along with the 2,4-D solution, the yield of valuable grass during a period of two months increased from 40 to 130 per cent, while the addition of the fungicide did not interfere with the weed killing or with the fertilizing. Further tests are under way.

Large-Scale Tree Planting

RUSSIA is reported to have planted some 500 million trees in 1947 as windbreaks, to protect some 2,500,000 acres of farm land in the prairie areas of the U.S.S.R. A five-year program is under way to give shelterbelt protection to an additional 17,500,000 acres by the end of 1950. Three hundred state nurseries supply seedlings. Fleets of tractors get the ground ready and experts take charge of the planting work. Windbreaks are from 40 to 60 feet wide.

The object is to eliminate the menace of drought that has hung over the fertile black soil of the U.S.S.R. Swept by dry scorching winds, these flat clay soils stretch in a broad belt throughout the entire southern part of Russia and Europe down to the Black Sea. It is reported that other measures, ranging from irrigation to erosion control are being used to give nature a working-over, so as to afford greater



A girl examines a Spraycopter during a demonstration at Cambridge, England. The machine is used for spraying field insect pests.

security to the farmer, especially in the areas razed by the German armies during the war.

Food Dehydration

DURING World War I attempts were made to dehydrate food, principally potatoes and soup mixtures, for shipment overseas. Dehydration removes moisture from foodstuffs and makes shipment possible in much smaller space.

Earlier attempts were not too satisfactory. In 1940, research was renewed in the U.S. department of agriculture with the result that for an expenditure of \$1,350,000 more than \$1,400,000 worth of dehydrated vegetables, fruit and eggs were purchased in the United States alone for the Armed Forces and lend-lease. Of this amount it is claimed that at least half a billion dollars' worth must be credited to the application of research findings. It was found possible to reduce moisture in the new dehydrated vegetables to one-half or less of the amount considered necessary 30 years before. Also compressed dehydrated products were evolved, by which for example, enough compressed carrots could be packed into a five-gallon can to feed 800 men.

Some Countries Need Meat

NEW ZEALANDERS last year ate 262 pounds of meat each. That is, domestic consumption per capita, including waste, averaged this amount. Argentinians followed with 235 pounds per capita, and after them came Australians with 196 pounds, Americans 155 pounds, Danes 138 pounds, Canadians 127 pounds, and Britishers 102 pounds.

Among 18 countries listed by the International Emergency Food Council for meat consumption, only four, namely United States, Canada, Denmark and Czechoslovakia ate more in 1947 than in pre-war. The country hardest hit was Germany, with only 42 per cent of pre-war consumption, which averaged 113 pounds per capita. Next came the Netherlands with only

51 per cent of pre-war consumption, and Switzerland with 68 per cent.

In actual low level of meat consumption Greece tailed the list both in 1947 and pre-war. Before the war, Greece ate 29 pounds of meat per person and in 1947 only 26 pounds. Next lowest pre-war was Poland with 44 pounds, reduced last year to 39 pounds. Then, strangely, came Brazil, a cattle country, the inhabitants of which averaged only 56 pounds pre-war and 38 pounds last year. France, Belgium and Chili were other countries averaging less than 90 pounds per capita pre-war.

Less Expensive Irrigation

E. L. GRAY, superintendent of water distribution for P.F.R.A., has indicated that with the use of new equipment it is now becoming possible to dispense with the labor-consuming method of ditch irrigation.

In the United States land is already being irrigated by a system of pumps, and light, movable aluminum or magnesium pipes. The water can be thrown as high as 150 feet and will fall almost like rain to cover a strip of 30 feet on each side of the pipe. Water



A sign beside the highway—and in school they teach spelling, too!

can be applied at the rate of one to two inches an hour.

The initial cost of this equipment will be largely offset by savings in labor, when compared to irrigation by ditching. An experienced worker at Brooks, Alberta, is able to irrigate five acres a day by ditching. With the aid of this artificial rain device it is not difficult for even an unskilled worker to irrigate ten acres in a day.

British Food Agreements

THE United Kingdom has made every effort to assure her supply of food. She has trade agreements with most of the food exporting nations.

She has an agreement with Denmark, covering the period from January to 30th of September, 1948. The trade will be of the value of approximately £50 million. Denmark has agreed to deliver not less than sixty-two and one-half per cent of her exportable surplus of butter at a price of 321s 6d per cwt. She guarantees delivery of 40,000 tons. She also guarantees delivery of not less than 80 per cent of her exportable surplus of bacon—about 22,000 tons at a price of 225s a cwt. The United Kingdom undertook to purchase no less than 90 per cent of Denmark's exportable surplus of bacon for the 12 months after the termination of the agreement, at the same price. She will also purchase other foodstuffs including eggs, cheese, condensed milk, meat and fish.

Payment for these commodities will be made with coal, at the rate of 870,000 tons per annum, iron and steel at the rate of 50,000 tons per annum, petroleum products from British controlled sources, and a wide range of manufactured goods including chemicals, machinery, vehicles and textiles.

Agreement with Australia guarantees egg shipments for five years, beginning July 1, 1948. Provision is made for increased production of eggs in Australia, with large shipments of shell eggs late in the year when European production is low. Provision is also made for an increase in the shipment of frozen and dried eggs. The agreement means the import of increasing quantities of eggs from Australia, reaching a peak of 375 million eggs in the winter of 1950 or 1951.

Poland undertook to supply £23 million of goods to the United Kingdom in the three years ended June, 1950, of which £6.5 million was to be delivered in 1948. This figure has since been raised to £11 million, the imports to include bacon, eggs, essential foodstuffs and timber. Long-term agreements are being discussed, the object of both governments being that Poland shall, as soon as possible, resume her old place as a permanent source of supply to the United Kingdom.

An agreement with the Argentine includes provision for purchase by the United Kingdom of 1,272,000 metric tons of maize, with an option to substitute 300,000 metric tons of barley for an equal amount of maize, if barley is available; also 85,000 metric tons of wheat, 20,000 metric tons

of linseed oil, 100,000 metric tons of oil-seed cake and meal, 8,000 metric tons of mixed edible tallow, 400,000 tons of frozen meat and 20,000 tons of boneless canned beef and mutton. Items which Argentina is to purchase from the United Kingdom include coal, petroleum, and chemical products, steel, manufactured products and 10,000 tons of agricultural machinery and implements.

The Anglo-Dutch trade agreement provides for the shipment to the United Kingdom of a wide variety of Dutch foodstuffs, including milk products, eggs, bacon, fruit and vegetables, up to a value of £24 million in 1948. There will be a minimum shipment of 4,000 tons of cheese, 2,000 tons of butter, 5,000 tons of bacon, 12 million dozen eggs, 10,000 tons of potatoes, 8,000 tons of cucumbers, 12,000 tons of tomatoes, 60,000 tons of dried bulb onions, 10,000 tons of pears, 6,000 tons of grapes, and unspecified amounts of other fresh fruits, vegetables and dairy products.

Russian Grain Exports

BEFORE World War I Russia's five-year average export of grains, mostly wheat and barley, was close to 11 million long tons. Between the two world wars, even by disregarding starvation at home, Russia shipped no more than four or five million tons in any one year; and from 1934-1938 accounted for less than five per cent of world exports as compared with 30 per cent for the period 1909-1913.

Within a year after the closing of World War II, Russia agreed to supply France with 400,000 tons of wheat and 100,000 tons of barley. Some smaller amounts were sent to Finland. In 1947, Soviet Russia, though producing no more than four-fifths of pre-war grain quantities, put into effect a stringent grain procurement campaign, in addition to postponing the abandonment of rationing. Up to March of this year, she was able to commit herself to the export of 3.4 million long tons of grain, of which over 1.9 million tons were wheat and rye.

Some portion of these exports must come from the 1948 harvest, but the total, though above the average exported during the inter-war period, will be substantially less than Russian exports in 1930-1931 and 1931-1932.

Of the 3.4 million long tons committed by Russia, 1.6 million tons will go to countries within the Soviet sphere of influence, including Poland, Bulgaria, Rumania, Czechoslovakia,

and Finland. The balance has been exported to Great Britain, Belgium, Switzerland, Denmark, Sweden, Norway and Egypt.

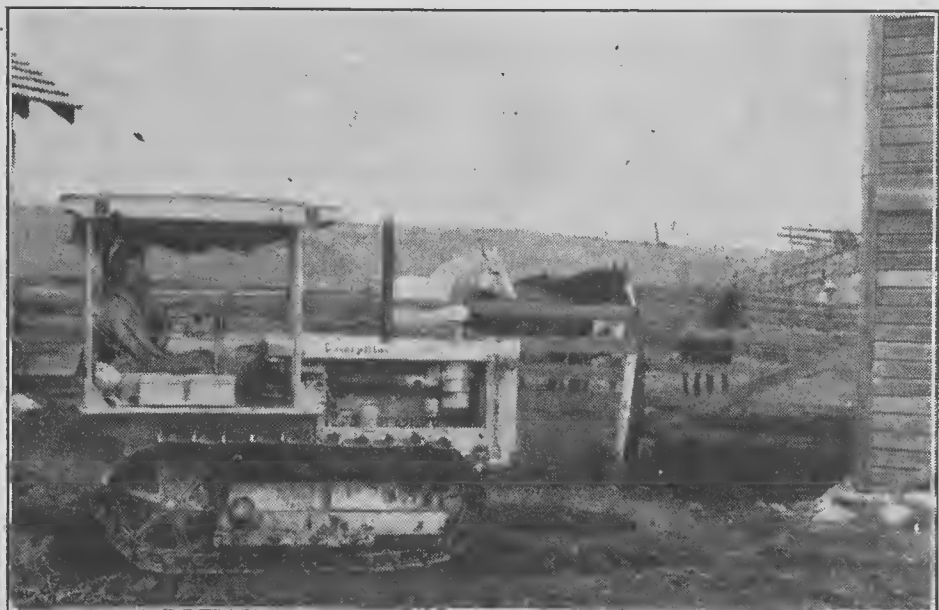
It is generally considered that to some extent at least Russian grain exports are political in purpose, and had the International Wheat Agreement become effective on August 1 of this year, most European countries would probably have relied on Canada, the United States and Australia for wheat imports.

Dairy Research Foundation

IMPRESSED with the importance of self-help, free enterprise and the reliance and dependence of the world's people on agriculture, leading dairymen of the United States have taken steps to organize what is to be known as the North American Dairy and Agricultural Research Foundation. The new organization was formed at Grafton, North Dakota, at a meeting of about 200 dairy industry leaders representative of all the dairy breed associations, and individuals from the States of Wisconsin, Minnesota, North Dakota, Ohio, as well as from Mexico and Manitoba. T. L. Townsend of Rockwood Farms, St. Norbert, Manitoba, is a member of the directorate.

Endorsed by the five dairy breed associations, a research institution is to be set up at Grafton, North Dakota, with funds raised by the industry. Plans call for a major research centre of 320 acres, in addition to five, 120-acre units. Single units will be stocked with herds representing single dairy breeds and will practice "on the farm" application of the latest research findings. All research will be supervised by a board of research directors consisting of a qualified agronomist, agricultural engineer, and animal husbandryman. The over-all objective will be efficient land use and an economic system of balanced farming designed to benefit both producers and consumers.

Underlying this move is a belief that with 85 per cent of all food, shelter and clothing coming from the land, with 57 per cent of U.S. farmers over 65 years of age, and with 12 per cent of U.S. farmers receiving 57 cents of every farm dollar, the dairy industry, which gives employment to one out of every 15 people in the U.S., must capitalize on the possibilities of research, and itself supplement the findings of public institutions.



[Guide Photo.]

Eric Jamieson, Alix, Alberta, displays his pride and joy, the Caterpillar tractor, while the horses, sleek and fat, idle in the barnyard.

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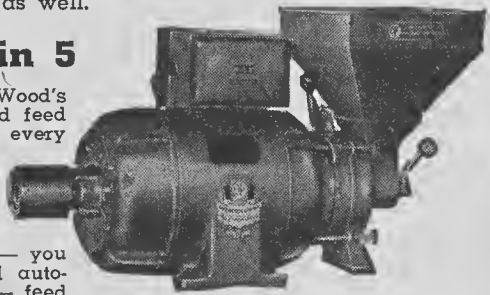
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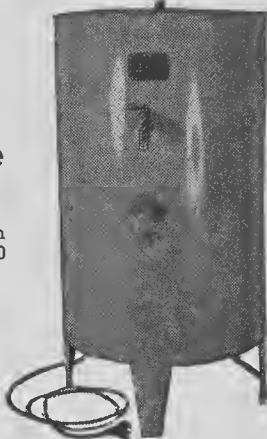
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Slow Finish For Better Hogs

EXPERIMENTS conducted by Dr. Crampton, nutritionist at Macdonald College, on hog rations have indicated that more grade A hogs can be marketed if the pig makes rapid gains from birth to about 100 pounds and makes slower gains from 100 pounds up to market weight. Further research has tended to confirm this conclusion.

The experiment was run in two parts so that half the pigs were fed during the summer and half during the winter. Each group was half male and half female. In each season half the pigs were started on a heavy ration containing No. 4 Northern wheat, and the others on a light oat ration. When the pigs individually reached a weight of 110 pounds, they were changed to one of three rations on which they were kept until they reached a market weight of 190 to 200 pounds. One-third of the pigs were kept on the same basic feed (wheat or oats) they had received from the start of the test; one-third were changed to the opposite basic feed; the remaining third went onto a ration the basic part of which consisted of equal parts of wheat and alfalfa meal. All rations contained the same protein-mineral-vitamin supplement.

A rather sharp decline in the dressing percentage of the pigs on the wheat-alfalfa ration was observed. This is directly related to the reduced fatness of these pigs. Male pigs consistently gained somewhat faster than female, but produced somewhat fatter carcasses. Little difference could be observed in the market hog that could be traced to the effect of the oat or wheat ration fed until it reached 100 pounds. Daily gains over the whole feeding period show that the pigs took longer to reach market weight when fed a wheat-alfalfa ration but produced a better carcass. The groups fed the wheat-alfalfa ration, with one exception, graded A. Only half of the hogs fed on wheat graded A, while those fed oats fell between these two extremes. The hogs fed wheat or oats were degraded for overfinish.

Slower maximum gains during the finishing period improves carcasses from the bacon standpoint. Mixing alfalfa meal with the wheat restricted digestible nutrients, slowed gains and gave better grades. Other feeds can be used to dilute the fattening value

of the ration. Tests with bran are now being conducted. It seems well within the possible that other feeds can also be used.

No effort has been made to establish a ration that can be recommended for pig feeding. Dr. Crampton and his associates have recognized that the greatest single defect in Canadian bacon hogs is overfinish. They are experimenting with feeds and attempting to find a combination that will correct this fault.

Cleanliness For Pigs

AT the Dominion Experimental Farm, Lacombe, every yard and lot in which pigs run to any considerable extent is plowed and seeded to a temporary pasture crop at least once each year. The result has been material reduction in losses of young pigs and an improvement in general health during the feeding period.

H. E. Wilson of that station points out that pigs are born free of diseases and parasites and that contrary to popular opinion, the pig thrives best in clean, dry, comfortable quarters. "Many of the troubles common to swine can be traced directly to unclean surroundings, such as the old, permanent hog lot, filthy hog houses and unsanitary feeding places. During the summer season too many pigs have the run of wallows and yards fouled from many years of use, deep in dust and depend for water on drainage pools. Keeping pigs healthy is chiefly a matter of good feeding, cleanliness and protection from extremes in weather."

Mastitis Is Common

ABOUT a year and a half ago the Alberta Department of Agriculture inaugurated a mastitis control program. Not long ago Dr. J. P. Linnepoe reported that of 44 herds tested, 36.6 per cent of the quarters examined were infected with mastitis. An additional 8.3 per cent were questionable, and 55.1 per cent were negative. None of the herds tested was entirely free from this trouble. The worst herd showed 73 per cent of the quarters affected, four per cent questionable, and only 23 per cent unaffected.

The percentage of infection seems to increase as the herds get larger. The smaller herds show the least infection. So far, it is reported the re-

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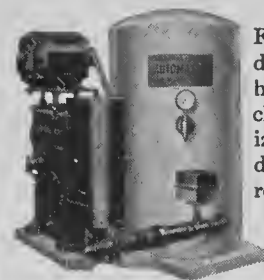
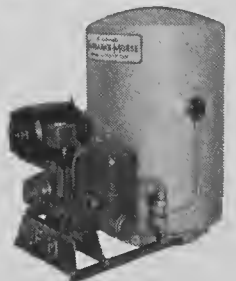
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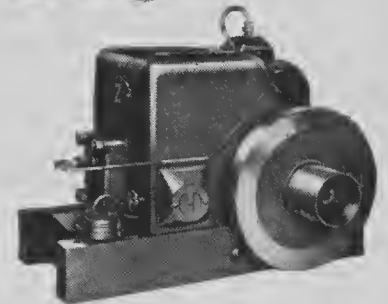


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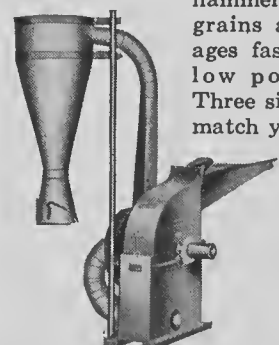
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These higher, persisting blood concentrations overcome infection rapidly, save animals and shorten the period of sickness. A once-a-day treatment is adequate. This saves labor and the animal is not excited by repeated handling.

For other farm animals use SULMET Sulfamethazine *Lederle*—recommended for—

Foot rot in dairy animals, beef cattle, and sheep. Septicemia in all farm animals and pets. Bacillary enteritis in dairy animals, beef cattle, and horses. Chronic mastitis, when used with penicillin. Coccidiosis in sheep and calves.

Cecal coccidiosis, pullorum disease, and acute fowl cholera in poultry. Also, for many secondary bacterial infections associated with virus diseases.

For maximum efficiency in the use of this product, it is essential to obtain an adequate diagnosis. For disease prevention and treatment, consult your veterinarian. •Reg. U. S. Pat. Off.

LEDERLE LABORATORIES DIVISION

North American Cyanamid Limited • 7335 St. Lawrence Boulevard • Montreal 14, Quebec

S U L M E T*

BRAND OF
SULFAMETHAZINE



Premonition

JESS and Darkie are big, shiny, black Percherons, with an amusing habit of standing with their heads together and wiggling their ears in a sort of sign language. They belong to R. C. Butchart, of Hartney.

Two years ago, while Mr. B. was spending the winter in town, he left his team with his good friend John Love, who lives about two miles away. Jess and Darkie were quite content in their new quarters, roaming the fields or standing in the sun wiggling their ears. They always came up in the evening to be put in the barn.

One day in March they failed to show up at supper time and an enquiry among the neighbors disclosed that they had been seen in a vacant farmyard about half way toward home. It was a mild night, so no one went for them. However, about midnight the Loves were roused by their dog, and there were the horses, waiting at the barn. A day or two later they were again seen on the road home. This time, a huge snow bank over which there was no trail blocked their way. The road made a detour through a field and the gate was closed. The horses moved back and forth from gate to snow bank several times, each time standing with heads together and likely wiggling their ears, though the writer couldn't see, from a quarter of a mile away. Finally they turned and started back for Love's and were gone some time, but later that same evening they came back to the gate. They stood there awhile, then on to the snow bank.

Perhaps they heard the dog bark or maybe some other familiar sound, but up went their heads and they were off, plunging through the deep snow and very soon after were in their own barnyard, where Mr. Butchart had arrived a few hours earlier. As they received welcoming pats from their proud owner a bystander might have heard. "Well! if you knew I was home why didn't you bring the van and your harness and that would have been smart. . . ." Jess and Darkie probably just wiggled their ears.—H. M.

sults of treatment have been quite satisfactory, but experience indicates that treatment must be accompanied by good milking practice and sound herd management.

Dairymen who have mastitis cows or want to know as much as possible about the control of this most costly of all dairy diseases, should get in touch with the authorities in their respective provinces. Write either to the provincial university in your province or to your department of agriculture.

Worms In Sheep

INTERNAL parasites of sheep thrive on the animals to the detriment of their health and thrift, and at the expense of the sheep breeder.

From mid-summer and on, sheep breeders should watch their lambs for symptoms of stomach worm disease. Affected lambs will have pale eye membranes and will move slowly. The worms can be eliminated by drenching with blue stone and nicotine, tetrachlorethylene, phenothiazine or any recognized stomach-worm remedy. If necessary the drench should be repeated in one month.

Fall diarrhoea in lambs is also a sign of internal parasites. The affected animals should be treated with phenothiazine. The control measure will be more effective if it is possible to avoid having the sheep graze on the same pasture year after year.

Control of Bang's Disease

CONSIDERABLE action is being taken in Canada to reduce the incidence of brucellosis of cattle—the disease commonly known as contagious abortion, or Bang's disease. The disease is particularly important because of the large losses that it inflicts on the cattle industry each year through loss of calves from premature birth, sterility of breeding cattle and reduced milk production. The germ, known as *Brucella abortus*, is also responsible for undulant fever in human beings.

The disease is introduced to healthy herds by the addition of infected cows to the herd, or infected pregnant heifers. Once introduced to the herd it will spread rapidly.

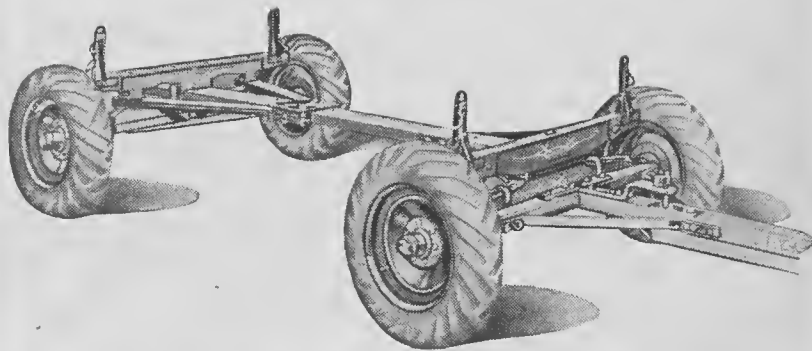
The symptoms are unfortunately inconstant and indefinite. Abortion is a symptom, but not all cows that abort



(Photo Sask. Dairy Branch.)

The 1947 Junior Dairy Calf Club at Asquith, Sask., included one very junior member and also a very junior calf with a stern mistress.

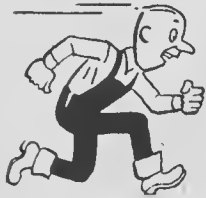
Why so many Leading Farmers prefer the MASSEY-HARRIS FARM TRUCK and TRAILER



IT'S LOW DOWN...

EASY TO LOAD

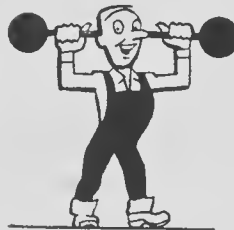
Men who have been accustomed to old-style high-wheeled wagons are amazed at the amount of sweat they save when they come to load one of these low-slung trucks. Low centre of gravity holds the load steady on the road, too.



EASY RUNNING...

IN THE FIELD OR ON THE ROAD

Two heavy duty tapered roller bearings in each hub make this truck easy to run, whether you're in the field for a load of hay or grain, or on the road to market or elevator. Equipped with 6-ply tires, 600 x 16. Demountable wheels.



BUILT FOR BIG LOADS...

UP TO 2½ TONS

The axles, bolsters, reach, and all parts of this farm truck are built to carry big loads safely, whenever it is desirable to haul big loads. At normal low road speeds, it will carry any weight up to 2½ tons. Wood parts are reinforced with iron.



EQUALLY GOOD WITH

TRACTOR OR HORSES

This combination truck and trailer is equipped with a stub pole for towing behind a tractor, and an extension pole for use with horses. It's the up-to-the-minute, 1948-model farm wagon for every kind of farm hauling.

REMEMBER THIS. The Massey-Harris combination farm truck and trailer was developed by the same group of farm-minded engineers who created the Massey-Harris self-propelled Combine, the Massey-Harris line of tractors, the Massey-Harris roto-lift one-way disc, and other top-ranking farm implements. These men are backed by more than 100 years of Massey-Harris experience. You'll never go wrong on a Massey-Harris.

MASSEY-HARRIS COMPANY LIMITED

Established 1847

WINNIPEG BRANDON REGINA SASKATOON YORKTON SWIFT CURRENT
CALGARY EDMONTON VANCOUVER MONTREAL MONCTON TORONTO

Farm Service Facts



PRESENTED BY.....

IMPERIAL OIL LIMITED

**Fuel Costs Less
Repairs Cost Less
Delays Cost Less.**

**When You Follow
the Right "Pattern"
in Lubricating Tractors**

One of the best possible safeguards against high cost of tractor operation is to follow a definite "pattern" of lubrication. That is, to set up and follow a regular schedule that includes these three divisions:

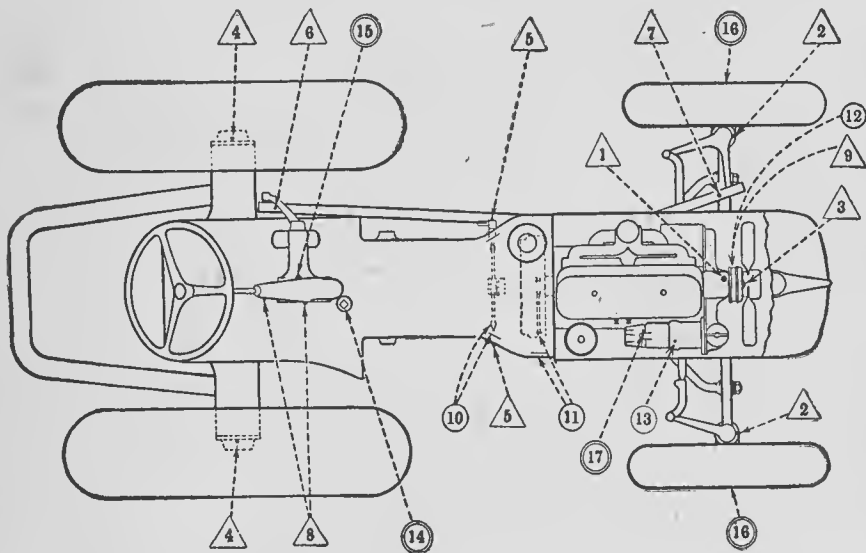
Daily.....Certain points to be lubricated every day...or after every 10 hours of operation,

Weekly....Certain points to be lubricated regularly once a week...or after every 60 hours of operation,

Seasonal...Certain points to be lubricated once or twice each season, according to the amount of usage the tractor gets.

Without a definite pattern to go by, it is almost humanly impossible to avoid missing certain points and letting them go too long without fresh lubricant. As a result you have excess friction which causes unnecessary fuel consumption...an excess of wear which causes unnecessary repairs...and often a delay during a busy season which causes a loss of farm income.

Most manufacturers issue instruction books showing the right pattern for the make of tractor they build...but if you have lost or mislaid your book, the accompanying illustration will serve as a guide.



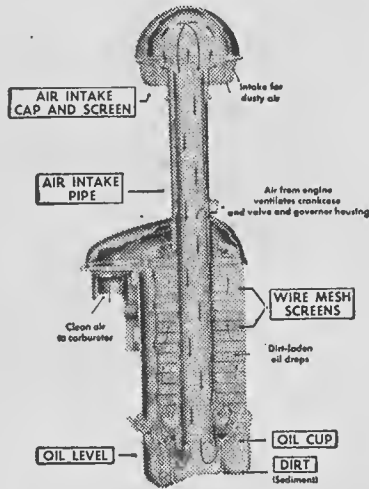
If you have an instruction book showing the lubrication pattern for your particular make of tractor, use it instead of this chart. If you haven't a book, this will help you. The numbers enclosed in the triangles show points that require lubrication daily, or after every 10 hours of operation. Numbers enclosed in single circles show points that need lubrication weekly, or after every 60 hours of operation. Numbers enclosed in double circles show points that need lubrication only once or twice per season, but which must not be overlooked completely.

Keep Engines Hot

As days become colder, it pays to take steps to keep tractor engines up to proper operating temperatures in order to vaporize the fuel completely. When using gasoline, the water temperature should be 160-180 degrees...when using distillate, 190-200 degrees. Use shutter or curtain to bring engine temperature up to the proper point quickly. It will help to save fuel and reduce wear.

5 Ways to Save Fuel

1. Don't let the motor idle unnecessarily.
2. Make one trip do for many.
3. Haul full loads wherever possible.
4. Keep equipment fit by tuning up motors in off-periods.
5. Don't forget that improper carburetor adjustments waste fuel.



OIL CLEANERS NEED HELP

**Will Remove 50 to 100 lbs. of
Dirt from Air Entering Carburetor
in Normal Season's Operation
if Serviced Regularly.**

Farming is supposed to be a "fresh air job"...and it is, in comparison with many other kinds of work...but the air cleaner on a farm tractor removes anywhere from 50 to 100 lbs. of dirt from the air going into the carburetor, in a normal working season of 800 to 1,000 hours.

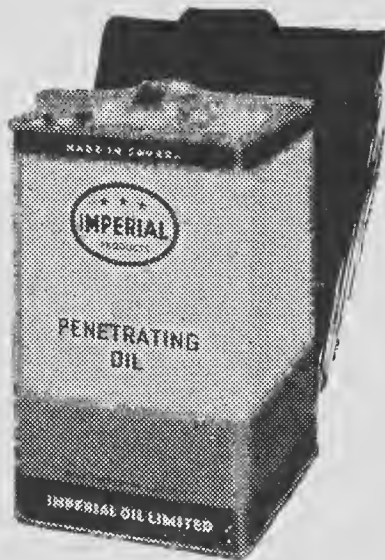
That is, it will remove 50 to 100 lbs. of dirt *if it is serviced regularly*. It needs help. Otherwise, it lets a lot of the dirt go through into the engine, causing excessive wear...which increases cost.

It pays to service the air cleaner after every 10 hours of operation under normal conditions...oftener under dusty conditions.

**Same as
Buying
Tractor Fuel...**

**If you want the Best
Buy**

IMPERIAL



are infected with the disease, and cows that are infected do not always abort. Difficulty in getting the cows in calf is also a symptom, but again it is not conclusive. Failure of the cow to "clean" is also related to the disease, but again many cows that fail to "clean" normally do not have the disease. Any or all of these symptoms should make the breeder suspicious. A blood-agglutination test, which can be conducted by any qualified veterinarian will conclusively prove the presence or absence of the disease.

Unfortunately, there is no proven medicine or cure, and farmers are well advised not to spend large sums on so-called "cures." A vaccine, known as Huddleson mucoid vaccine is being extensively tested in West Virginia at the present time, but it is too early to indicate its effectiveness.

In order to reduce the disease a policy of slaughtering all diseased animals has met with some success. A more general and more effective method is that known as calf vaccination, in which the calves are vaccinated with a weak strain of the disease when they are between the ages of five and seven months, so that they develop resistance and are no longer subject to infection. The inoculation must be carried out by a qualified veterinarian. Information regarding this inoculation can be gained from the Director of Veterinary Services or provincial veterinarian in your province.

For a breeder in Canada to have his herd certified free from contagious abortion, and to control the disease, regulations relating to the establishment and maintenance of brucellosis-free listed herds and official vaccination have been drafted and are now in effect. Dr. T. Childs, Veterinary Director-General, has summarized the main points in the regulations. These provide that herds may now be listed after three negative tests at three-month intervals, blood samples being drawn by the farmer's own veterinarian, followed by a negative check test three months later by a divisional veterinarian. Officially vaccinated animals giving a positive reaction should be considered as reactors only if they have reached the age of thirty-six months, unless infection occurs in the herd.

Further, it is provided that marked reactors may only be sold for slaughter, or sold under written authority from the Health of Animals Division, Dominion Department of Agriculture, to brucellosis-infected herds, providing the purchaser agrees in writing not to resell the animal without further written authority. If pregnant animals are brought in from non-tested herds they must be isolated until calving and must pass a negative blood test for brucellosis at least 21 days after the calf is born.

Private testing of any or all animals is prohibited. Under the regulations only official vaccination of calves will be permitted. Official vaccination is the vaccination of calves by a registered graduate veterinarian using vaccine of approved potency. Calves eligible for vaccination must be either natural increase to owner's herds, or from a herd operating under the Dominion or an approved provincial brucellosis policy which has passed at least one clean herd test. Calves other than this must first go through isolation and be officially vaccinated.

FIELD



Swathing speeds up harvesting when compared to straight combining. In a late fall this may be very important.

Progress Toward Permanent Farming

FARMING systems in the three prairie provinces are considered to be generally similar. Grain growing predominates. Climatic conditions in the three provinces show more similarity than exists between any one of these provinces and any other Canadian province. The great central plains region of the American continent which reaches into Canada and forms the Canadian prairies, touches all three of the prairie provinces.

There is, nevertheless, substantial dissimilarity which a closer study of farming in the three prairie provinces will reveal. Nearly all of the brown and dark brown soils of the prairies are in the provinces of Saskatchewan and Alberta, whereas nearly all of the southern and cultivated portion of Manitoba lies within the black soil zone. This difference alone, implying as it does differences in average moisture conditions, has led to the development of marked differences in cropping systems and in crops grown.

Roughly speaking, the cultivated farmland of Alberta is something more than twice the acreage of the cultivated land of Manitoba, and that of Saskatchewan is between three and four times as much. Nevertheless, the acreage devoted to barley in Manitoba is more than the barley acreage of Alberta and nearly as much as that of Saskatchewan. The flax acreage of Manitoba is around three times the acreage of this crop in Alberta and not far from half the acreage in Saskatchewan in recent years. The oat acreage is perhaps more nearly apportioned according to total cultivated acreage in the three provinces than any other crop, whereas the acreage devoted to hay and clover shows the smallest amount of relationship, with 419,000 acres in Manitoba, only 662,000 acres in Alberta, and the extraordinarily small acreage of 350,000 acres in Saskatchewan. The alfalfa acreage, which in Manitoba amounts to 285,000 acres, stands at about the same figure in Alberta, but only 88,000 acres in Saskatchewan.

These broad diversities do not coincide with what might be hoped for as a more permanent type of agriculture than any which has yet been developed on prairie farms. During recent years, much discussion has taken place on

the general question of land use in the three provinces, and it is agreed that if the future abandonment of arable land is to be avoided, some modifications of our present system of farming must be brought about.

In Manitoba, Professor J. H. Ellis, of the University of Manitoba, feels that the type of farming practiced in the province is the logical outcome of natural and economic law, and that until markets are available for more diversified products, marked changes in the type of agriculture are not likely to occur.

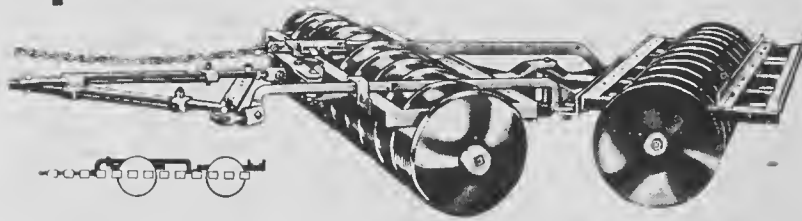
Saskatchewan soil and crop men feel the urgent need for more grass and more manure and more soil improving crops such as legumes. In fact, however, farm practice is moving in a contrary direction, encouraged by the high price of grain crops and the rapid development of mechanized farming, which, so far, has meant less barnyard manure and little or no rotated pasture. They feel that in the black, degraded black and sandy, dark brown soils that have shallow water tables, the feeding of coarse grains on the farm to various classes of livestock, or a system of dairy farming, would offer a practical alternative to the wheat economy. It is felt also that on other types of soils a permanently successful agriculture can only be based on crop rotations involving legumes and grasses and a thriving livestock project. Nevertheless, these changes almost invariably result from economic pressure, since the farmer will almost certainly use the practices which will result in the greatest profit.

In Alberta, somewhat the same situation exists. Ideally, commercial wheat production should be restricted more or less to the best of the brown soils, outside of the irrigation district. Grain growing is also adapted to the dark brown and the shallow black soils, but there is growing need for conservation of moisture, soil drifting control and the control of water erosion. Legume and grass crops can be grown more successfully and more livestock produced on the black and degraded black soils. Though grain growing still predominates on these soils, diversification under price encouragement would be of advantage to the industry. The grey-wooded soils are often severely leached. Here, rotations including legumes and supple-



**DEEP PENETRATION
WITHOUT PULVERIZATION**

TOWNER OFFSET DISC HARROW



LOW DRAFT LINE 6 WAYS BETTER...

1. **NO "ROLL OVER" ACTION**—equal penetration of all disc blades at all times.
2. **DISC GANGS WORK TOGETHER**—front and rear gangs work with instead of against each other.
3. **ELIMINATES "WHIP ACTION"**—absence of rear gang "whipping" permits closer work among trees.
4. **DISC BLADES WEAR EVENLY**—rear gang spends no time riding "piggy back," loafing on the job.
5. **PROVIDES LOWER ORCHARD SHIELD**—for safer, cleaner, work—closer to the trees.
6. **ASSURES LEVEL GROUND**—disc gangs working in harmony insure perfect results all over the field.

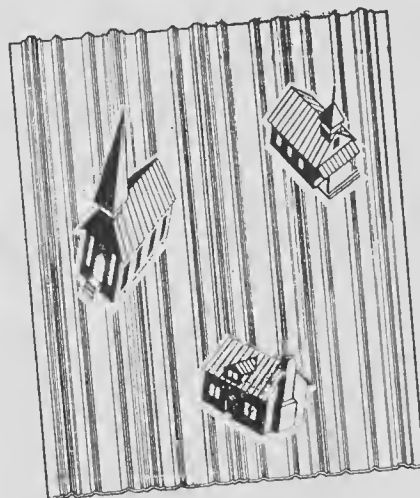
SOLVING THE PROBLEM OF LIGHT-LAND FARMING.

The Towner offset disc harrow was the first of its kind ever manufactured. Constructed along sound engineering principles and proven in the dustbowl of the United States, this Towner disc harrow meets every challenge of light, sandy or soft soil farming... an implement that can save you fuel, time and effort. Get full details on this advanced disc harrow by writing direct to:

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DISTRIBUTORS
RED DEER - ALBERTA

WE CARRY A COMPLETE LINE OF TOWNER PARTS

ONCE MEANS FOREVER



*Buildings Roofed
or Sheathed with*

DOMINION RIBBED ALUMINUM

assure

Everlasting Permanence

STOCKS

are now available together with aluminum nails, ridge rolls, flashings, etc. in our Winnipeg and Calgary warehouses.

Maintenance costs are eliminated once and for all. Dominion Ribbed Aluminum neither warps, rots, shrinks, rusts or burns. It need never be painted. Its natural beauty weathers to a rich silvery grey, giving your buildings a new modern beauty. It is easily applied, light in weight and insulates against heat or cold. In the summer buildings are 10° to 15° cooler. See advertisement elsewhere in these pages of The Dominion Foil Limited.

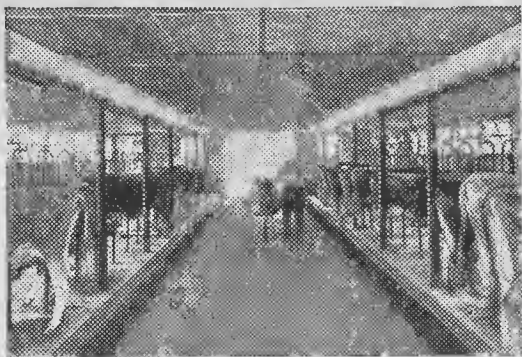
WRITE FOR COMPLETE INFORMATION WITH INFORMATIVE BROCHURE
to

UNITED GRAIN GROWERS LIMITED

WINNIPEG - CALGARY - EDMONTON - SASKATOON

When Writing to Advertisers Please Mention The Guide

... for permanence, economy, fire safety



Johns-Manville *Asbestos* Flexboard

• You'll find J-M Asbestos Flexboard one of the most useful, fireproof materials for the farm. It's ideal for dairy barns, hog houses, machine sheds, hen houses, grain bins and other farm buildings. Flexboard cuts upkeep expense, because it needs no paint or other preservative. Use it inside and out for maintenance-free walls, floors and ceilings. See your J-M dealer for full information.



FREE BOOK—For your free copy of the new J-M book, "Flexboard for the Farm," write Canadian Johns-Manville, Dept. CG-9 199 Bay Street, Toronto.



B-621

DURABESTOS ROOF SHINGLES • CEDAR-GRAIN ASBESTOS SIDING SHINGLES • ROCK WOOL INSULATION • FLEXSTONE ASPHALT SHINGLES • ASBESTOS FLEXBOARD • ASBESTOS ROLL ROOFING

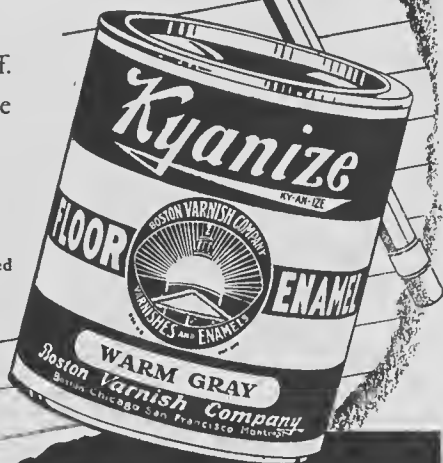
Johns-Manville BUILDING MATERIALS

Note Get Kyanize Floor Enamel

Get it from your favorite Kyanize dealer and brush on the smartest, most durable and smoothest coating you ever used on wood, concrete or pattern-worn linoleum floors, indoors or out.

Easy to apply, hard to wear off. Washable. Self-smoothing. Choice of modern colors.

Wholesale Distributors:
The J. H. ASHDOWN HARDWARE CO., Limited
Winnipeg, Regina, Saskatoon, Calgary, Edmonton
BOGARDUS-WICKENS, Limited, Vancouver



Kyanize

Self-Smoothing Paints

THE LIFE OF THE SURFACE

mented with fertilizers have generally given more satisfactory and economical results. It is in this area of Alberta where a substantial increase in mixed farming is desirable and will probably occur with the progress of land clearing, provided satisfactory markets are available.

How To Identify Repair Parts Of Farm Machinery

A BUYER of many years experience states that when buying repair parts by mail it is an excellent plan always to make a rough sketch of the part, portion of the machine, or whatever it is that you want repaired or replaced. This is particularly true, of course, if the machine is an old one, if the part has no number stamped on it, or if there is a possibility of a misunderstanding.

Anybody can make a rough sketch that is distinct enough so that the manufacturer or dealer can readily understand what is wanted. It is not at all necessary to be skillful as a sketcher. Make a rough, general sketch and then, by means of an arrow, point out the part that is wanted. The more information given to the manufacturer, the better, and the more promptly can the repair be made.

Thus, if it is a broken gear, it is not always sufficient merely to inform the manufacturer that "the cast iron gear on the back side of the machine we bought from you last November is broken." Yet manufacturers do frequently receive explanations that are just as vague as that. As a result, the wrong part is often shipped and much trouble ensues in straightening the matters.

Many machines do not have any particular right, front, left, or rear, so be careful about using these words in your description. There is nothing better than a rough sketch, even though it may be exceedingly rough. The sketch method is the best method because it is simple, and it is the most certain. Try it.—W. F. Schaphorst.

"Home Made" Farm Machinery

HOME-MADE farm machinery is often all right and commendable, but not always. Not long ago this writer was invited to visit a farm shop which was too much home-made. Hangers of overhead shafting were made entirely of wooden 2x4's, nailed

together. Each hanger creaked loudly, and each one creaked in a pitch entirely its own, out of harmony with the others. Fortunately the shafting didn't run at a high speed, or the noise would have been unendurable. Even as it is this small shop is far noisier than some factories that are many times larger in size.

As for the bearings—they were made of ordinary pipe sawed off and bolted to the wooden hangers by means of metal straps. Of course there was no such thing as "fit" between the shaft and bearings. They operated with extreme looseness and rattle. They were not babitted.

Transmission of that sort, to be sure, is decidedly inefficient. By using good hangers, bearings, and shafting, the shop could be speeded up, production increased, power saved, time saved, and noise eliminated, and the farmer would then have a shop of which he could be proud. As it is now constituted and operated he certainly is not proud of it. He "wishes" he had better hangers, bearings, belt-ing, and shafting. He "wishes" he could speed up. He "wishes" the shop were less noisy. Such economy can be expensive. Home-made equipment is not to be scorned, but it has its limitations.—W. F. Schaphorst.

Plowing Rejuvenates Grass

AFTER a field of brome or crested wheat grass has been down for a number of years, it gets to the stage commonly known as sodbound. From seeds shattered on the ground and from new shoots sent up from crowns and roots, the plants get to be too thick. Underground, the soil is a mass of roots, all alive and competing with each other for the amount of moisture and plant food available, with the result that hardly any of the plants make good growth to provide decent hay and pasture.

During the years that the land has been cropped and in grass, there has been a steady drain on its supply of organic material and little has been put back. Now if we take a breaking plow and turn an old grass field over, let us see what happens. Probably 75 per cent or more of the plants are killed out and their root systems with them. As soon as all these plants are killed, they start to decay and everything about them becomes food for the survivors, or for a crop that is sown on the land. The plowing also



The question of the economy of pick up balers can always start an argument, but at least they are a neat and convenient method of hay making.

IMPORTANT NEWS for breeders of CATTLE AND SHEEP...



Essential cobalt now available in WINDSOR COBALT IODIZED SALT

COBALT deficiency in the diet of cattle and sheep can have disastrous effects. A leading livestock authority lists the effects of continued cobalt deficiency as:

loss of appetite
depraved appetite
progressive emaciation
and loss of farm profits.

Since hay and grain may be low in cobalt content, cobalt should be provided from a dependable source. Windsor now brings you that source—Windsor Cobalt Iodized Salt—to give your livestock the best and cheapest insurance against the dangers of cobalt deficiency. It combines three important elements of livestock diet: salt, iodine, and cobalt.

Windsor Cobalt Iodized Salt is available in three forms: as a loose stock salt for mixing with feed; in 50 lb. blocks for the pasture; and in 5 lb. licks for barns.

Protect the health and productivity of your livestock by giving them free access to



**WINDSOR
COBALT
IODIZED SALT**

A Product of

CANADIAN INDUSTRIES LIMITED



SALT DIVISION

loosens up the soil and increases its moisture holding capacity so that when the grass stand re-establishes itself, or is reseeded, greatly improved yields are obtained for a number of years.

Breaking over of grass stands is an absolutely essential and paying practice. If it can be preceded by an application of barnyard manure or followed up with a treatment of ammonium phosphate fertilizer, so much the better. The only drawback is that machine companies are under the impression that since the pioneering days on the prairie are past, no more breaker shares are needed. Perhaps a number of letters sent to their headquarters will cause them to resume breaker share production.—Robert J. Roder, Alberta.

Deterioration Of Brown Soils

WHEN the West was first opened up the great need was for wheat varieties suitable for the climate and soil. Marquis met this need. The second problem was drought, partially met by summerfallowing. Then came disease in the form of rust, and also insect pests. Wind erosion came along, then weeds, and for all of these problems a more or less efficient solution has been found by farm scientists of many varieties.

The one problem that is fundamental to all farming is soil deterioration. Are our present farming methods exhausting the soil unduly? Much of what we know has been learned by the system of trial and error, and there is more than a little truth in the statement recently made by Dr. J. L. Doughty of the Soil Research Laboratory, Swift Current, that "it is doubtful if sufficient information is available at the present time to definitely outline a practical, permanent system of agriculture for the prairies."

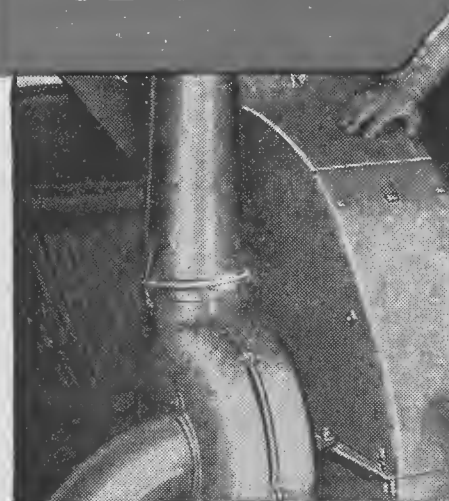
Dr. Doughty has recently reported on the loss of nitrogen and organic matter in the brown soils of the prairie provinces. Stated briefly the results of the study may be summarized as follows:

When brown soils are brought under cultivation, a rapid loss of nitrogen and organic matter takes place. This loss amounts to about 20 per cent and occurs within a few years after breaking. When soils have been cultivated for 15 or 20 years, the rate of loss is much slower.

A careful examination of crop yield figures for crop districts in the brown soil zone of Alberta and Saskatchewan did not indicate that there has been any appreciable drop in yield during the 25 to 30-year period for which the information is available. Specific yield experiments do show a decrease in yield during the first four or five years after plowing up grass land, but once this initial period is past, no definite decrease in yield is shown that can be attributed to a loss in soil fertility.

Another important factor is that after grass land has been plowed, the loss of nitrogen and organic matter is more rapid than the accumulation of these materials while the land is under grass. The restoration of this nitrogen and organic matter, therefore, is an important problem for farmers in the brown soil area. The most practical means of restoring organic matter on the medium and fine textured soils is the return of all crop residue. This recommendation is in clear opposition to the common practice of burning straw or stubble.

"You bet it pays
to own a
**JOHN DEERE
FEED MILL**"



DANIEL MOORE of Bettendorf, Iowa, is "happily married" to his John Deere Feed Mill. The year 'round, Mr. Moore keeps his mill busy earning money processing feed for his dairy cows, pigs, chickens and stock cattle.

Does it pay? "You bet it pays!" says Mr. Moore. "For example, last spring I processed two tons of chick feed consisting of 1600 lbs. of corn, 600 lbs. of oats, 200 lbs. of choice alfalfa, 400 lbs. of bran, 200 lbs. of shorts and 1000 lbs. of baby chick concentrate at a cost of \$194.00 based on actual market price of feeds used. The same commercial feed would have cost me \$250.00. Similar savings have been made in every feed-making job.

"What's more, when you process your feeds, there's no feed bunk waste. Your feed goes farther—earns more money in meat or milk."

NOTE: An early issue of "The Furrow" will carry a complete story on Mr. Moore's experience with a money-making John Deere Mill. Be sure to read it.

See the full line of profit-stretching John Deere Mills at your John Deere dealer's. Write today to John Deere, Moline, Ill., Dept. M.F., for free descriptive folders.

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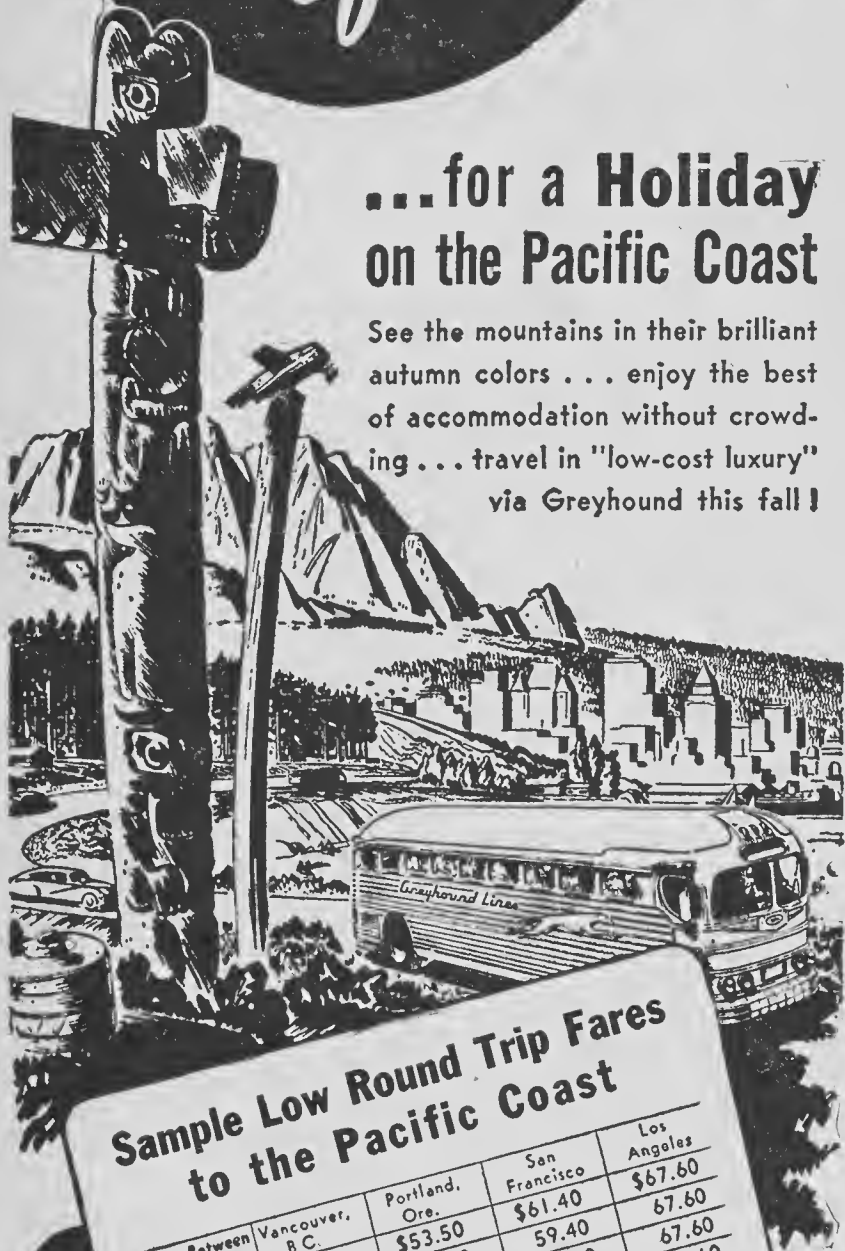
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Australia's Sheep-Wheat Economy

Continued from page 10

same qualities. On one ranch visited, 32,000 purebred ewes averaged 18½ pounds fleece weights. The outstanding work of the purebred breeder is all done to build Australia's commercial sheep industry.

The sheep operator with large numbers must have a sheep that will use the sparse vegetation, whether it be grass, shrubs or other forms of small bushes. The carrying capacity varies from 10-25 acres per sheep and more in the drier parts. The sheep must be a good grazer and be able to adapt himself to the climatic conditions. Sheep are not herded as on the prairies, but are run out like cattle on the range.

When management operations are required, such as shearing, dipping, etc., they are mustered (rounded up) by the help with well trained sheep dogs. Ewes lamb out in the open country and lambing sheds are unheard of. There are usually several riders among the sheep during the lambing season but actual lambing problems are not so acute.

One of the major management operations is the shearing. An up-to-

and death soon occurs. Preventive measures are taken to minimize the losses and the sheep man of Australia must be a student of animal pathology and veterinary medicine, otherwise the flocks would not survive. Aside from the home, the overhead investment is not high on the sheep ranches. Economy in buildings is the key in keeping operating expenses low.

In the state of New South Wales the grazing lands in the western part are divided into districts and each district is administered by a duly elected Pasture Protection Board. They carry out the policy of the government. The leases have a tenure of 999 years, called perpetual leases. The government lays down broad policy and the board carries it out within limits, e.g. the government rules that the lease rental cost shall not be more than 7d or 9.3 cents per sheep per year and not more than 95 cents per head for cattle.

The board must administer the grazing lands on as low assessment as possible and carry out many other functions such as fencing, water development for public watering places, rabbit control, eradication of the wild dog (the dingo). They administer the lands and co-operate with all departments of the government for better land use generally. The livestock



Watering arrangements at an Australian staging camp.

date shed with all equipment is provided by the owner, but all shearing is done on a contract basis, highly organized under the labor laws. Shearers live in the cities and a good run will last for eleven months of the year as the shearing period varies with conditions.

As the fine wool constitutes the main source of income, wethers are kept till they are six years old just for the wool alone. Then they are marketed as fat wethers to the trade.

Despite the sparse vegetation and the hot, dry climate, it is remarkable how well they do and the condition they maintain, which indicates their adaptability to the climate. The sheep man is not without his problems. Flies are a serious problem. Blow flies will strike the sheep, mostly in the hind-quarters. In a very short time maggots appear and will eat away the flesh

owners have great faith in the Pasture Protection Board as it enables local responsibility and fair consideration for the problems of the leaseholder.

In visiting the farms the first impression a visitor receives is the provision made to collect run-off water. Corrugated iron tanks are constructed beside each building to collect the rain water from the roofs. Many farms depend upon this supply for their domestic use and for livestock around the headquarters. Small towns depend upon this supply as well. For livestock watering places, the main sources of water supply are Artesian wells, shallow wells, earth dams and tanks (dugouts) to collect run-off rainfall. Where it is not possible to obtain permanent water supplies, pumping from the Murray River and others to a pipeline was initiated many years ago in South Australia.

THE farmers are assessed approximately seven cents per acre for their water supply and a maximum amount is set which is sufficient for the farm supply. Another project consists of pumping to an open ditch and the farmer is allowed to fill the reservoirs on his property at a reasonable rate. In western Australia, the 300-mile pipeline to Kalgoorlie serves farmers and towns en route and they depend on this supply entirely. Farmers haul water many miles from this pipeline.

All state governments have an active water conservation program. Livestock are trailed long distances to market and it is necessary to make provision for watering places en route. Public watering places constitute an important part of the state's activities. In the western division of New South Wales there are 350 public watering places on the roadside. Charges are levied at 20 cents per hundred for sheep and 1½ cents per head for cattle. At each watering place there is a caretaker who usually has small farming operations. Cattle and sheep trail as far as 300 miles to market; therefore, at each watering place reserve grazing areas are maintained.

The Australian farmer in the dry country has many water problems to meet. Climate does not allow run-off from snow as in western Canada. He has become an expert in water conservation and has to adopt all known practices to his conditions. Water is the soul of his livestock operations.

Practices in dry land farming vary greatly with the soil and climatic conditions. On the lighter soils erosion by wind is quite prevalent. In South Australia, Victoria and New South Wales there are large areas of farm land that constitute an immense problem. Soil drifting in sand dunes is far worse than drifting conditions that occurred on the Prairies during the early thirties.

The drifting problem is minimized by the sheep-wheat economy, because the pasture program reduces soil movement. On the cultivated lands, however, little attempt is made to reduce the size of field or provide trash covers with a cloddy condition. On summerfallow the fine working of the soil to a two-inch depth is common practice and leaves it in a receptive condition for drifting. There are many different types and kinds of machines used, but few of them meet the requirements of proper tillage practice to minimize the danger of soil drifting.

THE farmers are quite conscious of this problem but machines have not been developed to meet the problems of soil erosion by wind. There is a great need for much research and exploratory work to combat this problem. In the writer's judgment it is Australia's No. 1 dry land farming problem.

The main varieties of wheat are of less quality than the hard, red spring wheat in western Canada. Farmers attribute the reason to the grading system which they designate as F.A.Q., meaning fair average quality. This is the main grade in marketing and there are insufficient grades to pay a farmer on a quality basis. The plant breeders have developed new and better varieties of wheat that are rust resistant and have good milling and baking qualities. Varieties such as Kendee and Pogo have proven adapt-

able but so far they have not been widely grown.

The marketing of wheat in 200-pound bags is gradually changing to the bulk system. Western Australia and South Australia are handling most of their crop by this method and the other states are making progress. It is still a common sight, however, to see thousands of bags of wheat stacked along the railroad.

In crop production the use of fertilizers is necessary. It is a well established practice and farmers realize the returns amply compensate for the costs.

The writer's impression of dry land farming in Australia was that there was a great need for an awakening to the newer techniques in tilling the soil. Much research is necessary to establish fundamental principles in soil moisture conservation and soil erosion control. There is a need to improve and modify tillage machinery to do a better job. A challenge presents itself to all those concerned.

AS the writer spent most of his time in the dry land regions, little has been said about the areas of higher rainfall and greater productivity. Like any other country, good farms along with good livestock predominate the countryside. The Australian farmer is just as conscious of maintaining a grassland economy as the New Zealand farmer.

Irrigation is an important part of Australia's agricultural economy. Its history is full of interest and depicts the courage and vision of the engineers in the early days. Irrigation projects have been well constructed. Like western Canada, the capital construction costs have been paid by the governments as they recognize the place of irrigation in the national economy. Great plans are being made for the future in constructing large projects. The supply of water will be a limiting factor in what can be accomplished. Australia hasn't the supply of water that flows from the east slope of the Rocky Mountains in Alberta.

Irrigation development has not been without its problems. Little consideration was given in the early days for the need of research in soils and water application. Lack of drainage and consequent saline problems soon became threatening. It was foreseen in time and the loss of profitable orchard areas and thriving towns was averted.

The sprinkler system of irrigation in the fruit orchards is quite common. While the first cost appears quite high, the saving of 30 per cent in water and the more even distribution of water soon provides compensation.

Australia has many other activities of interest to western farmers but space does not permit further discussion. There are many common problems. Sitting in a farm home in any part of Australia brought out discussions that would be applicable to any part of the Prairies. While problems differ in application, the approach is fundamentally the same.

There is much the Australian farmer can learn from western Canada, particularly in the approach to dry land farming problems. There is much that can be learned from him, particularly in livestock breeding and the field of animal science. Australia and Canada are two great countries. Closer contacts between the two could achieve much for the benefit of both.



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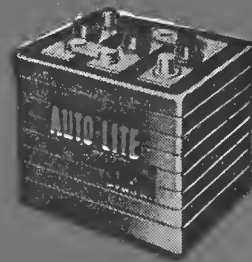


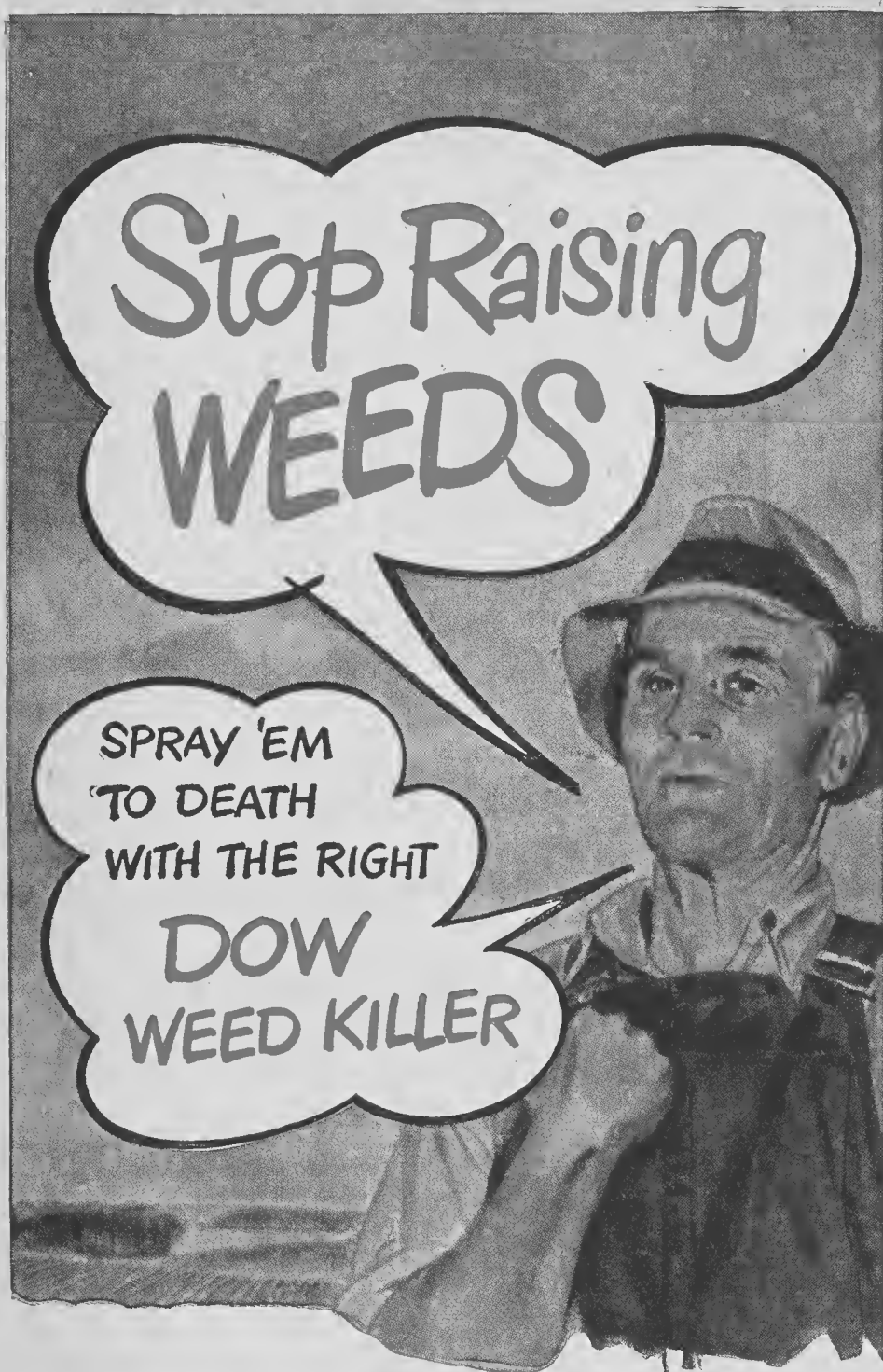
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Summer Raspberry Work

MOST people who have good fruit gardens like to keep at least a small patch of red raspberries. These can be handled with very little work, but work that is needed should be done at the right time.

The culture of raspberries centres about the fact that the fruit is as juicy as it is delicious and is borne on one-year-old canes. This means two things, namely, that strong, healthy cane growth is desirable and that fruit will be borne next year on the canes the gardener is able to produce this year. Where plenty of moisture is available it is, of course, easy to get good, strong canes, but in relatively dry areas, special attention must be paid to the conserving of moisture. This means either absolutely clean cultivation throughout the season to keep down weeds, or a good straw mulch applied very early in the spring after the first cultivation.

Such a mulch of four to six inches of straw will conserve moisture during the season and keep down weeds, provided the straw is evenly distributed. The mulch should be removed about the middle of August and clean cultivation given the patch for the remainder of the season. It should not be left on the ground over winter.

During the growing season it is a good idea to remove the excess canes produced by the plant. This is easily done with a hoe and more rapidly than if a pruning knife must be used after the canes have matured and hardened.

The best time for pruning raspberries is immediately after the fruiting season. Pruning consists of the removal of dead or old canes and thinning the new ones where they are too numerous. If the raspberries are grown in hills, from 10 to 12 canes should be left in each hill. If the raspberries are grown in rows, the canes should be thinned out to from nine to 12 inches apart, leaving the strongest and most vigorous canes in each case. Generally, an attempt is made to leave two rows of canes in a hedgerow and in every case canes should be cut as close to the ground as possible.

Nursery Stocks Bring New Weeds

IT is claimed that the shipment of nursery stock from one district to another has become an important factor in distributing noxious weeds across the prairies. This, of course, occurs only or chiefly when the nursery stock is shipped with soil attached to the roots.

The warning comes from the Dominion Experimental Station at Swift Current that purslane or wild portulaca is a very obnoxious and persistent annual that is spread far and wide by nursery stock. Even more serious is the spreading in this way of field bindweed, hoary cress, Russian knapweed and leafy spurge. It is claimed that practically every infestation of field bindweed that has been investigated by the Swift Current Station has been traced back to introduced nursery stock, and that a large percentage of the other three weeds have had similar origin.

It is therefore recommended that when suspected new plants are noticed around the base of nursery stock they should be pulled out, taking care to see that the whole root, with the root stock, is removed and destroyed. Quite a few of the perennials will grow easily if even a small piece of root is left in the soil.

Removing Old Trees

SOMETIMES old trees need to be removed and equipment is not available for using a stump puller or a tractor with a triple block. This means that the tree must be cut down and the stump rotted. In such cases, it is also desirable to prevent the old stump from sprouting.

The best time to do this is in August. On a tree that is still standing, a ring of bark four or five inches wide removed in a band clear around the main stem, will stop the downward flow of sap and cause it to ferment. If it is practicable to saw the tree off at once, the bark of the stump should be peeled back from the stem for several inches all around so as to leave it flaring out. This will allow water to get in between the bark and the wood and this is almost certain to ferment the sap and kill the tree. A year or two later the stump can be dug out more easily.

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DOGS and cats can be kept away from ornamental plants standing on porches and verandahs, as well as from flowers and shrubs growing in beds and in various locations on the lawn, by spraying with a dilute solution of nicotine sulphate. The smell is very offensive to cats and dogs, even when put on so thinly that the human being cannot detect it.

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Winter . . . And Trees

Part II—What can we do about an unsolved problem?

by R. J. HILTON

THE drying of plant tissues by rapid freezing and high winds may require complex mathematics and physical chemistry to explain, but it does occur and its effects are shown in the most serious form of winter killing: That of the "xylem" or sapwood, in lateral branches, main scaffolds, and even in large trunks when the injury is very severe. The sapwood on relatively young branches extends from pith right out to the cambium layer that separates sapwood from the inner bark. Its death means a serious disruption of the upward flow of nutrients and water. Thus the plant tends to starve.

The serious fireblight epidemic of 1946 in North Central Alberta meant a lot of severe summer pruning. This in turn resulted in (1) a lot of late, succulent, sucker growth; and (2) the lack of sufficient stored carbohydrates in the plant cells. Thus the trees were in very poor condition to withstand the seriously cold 1946-1947 winter. During the summer of 1947 the trees struggled to overcome the effects of the sapwood killing, and many made a good recovery, for the growing season was long, cool and adequately moist. Many others, however, did not recover sufficiently to store much new food for the early spring rush of growth. The result is that they could not come through even the mild 1947-1948 winter and must now be uprooted.

Adequate windbreaks will do much, not only to hold snow as mulch and as natural irrigation, but to reduce winter wind velocities and thus add one more nail to the structure we hope to use for winter hardiness control.

Some of the factors already discussed are indirectly tied in with the amount of water a plant has at its disposal, and the season when it is most abundant. Not a few prairie orchardists are unable to provide irrigation, so must conserve all possible soil water and summer rainfall against dry seasons. Hence the practice of "keeping the soil black" is widely adopted. Undoubtedly this does conserve moisture by not allowing weeds to compete with the trees. It should be remembered, however, that deep cultivation not only destroys feeder roots on the trees, but actually tends to dry out the soil. Shallow cultivation is from all points of view the most satisfactory practice.

EVEN shallow cultivation will tend to keep decomposition bacteria active in the top soil; this means perhaps more nitrogen release than is desirable for the trees, particularly during late summer and when there is plenty of soil moisture. This will tend to keep the trees growing later than they should, and may result in poor hardening in preparation for the winter. The answer to this may lie in allowing weed cover or a seeded cover crop to grow in late summer as discussed earlier. There is some evidence that ample moisture at freeze-up time is desirable for over-wintering plants, but there is none to indicate that a more-than-normal water supply

during August and early September is beneficial. In fact, it may be quite harmful, as has already been pointed out.

The whole question of proper cultural methods for tree fruits on the prairies remains just that . . . a question. This isn't good of course, but the fact is that many other crops are of far greater economic importance and receive first consideration in prairie research programs. In any case, whether we are doing a little amateur investigation or formulating a large project on this matter, we must keep the fundamentals in mind. Nature herself may hold the key. Careful observations on the "natural culture" of saskatoon and chokecherry trees may yield important clues as to how we should handle the exotic apple for maximum growth and yield, while still maintaining the utmost winter hardiness that environment can provide.

Frozen Fruit Dessert

HOW would you like to have a frozen dessert as creamy as ice cream and as flavorful as fresh fruit? Not long ago the Dominion Department of Agriculture demonstrated such a dessert in Ottawa to representatives of hotel, restaurant and railway dining car services and the ice cream and frozen fruit industries.

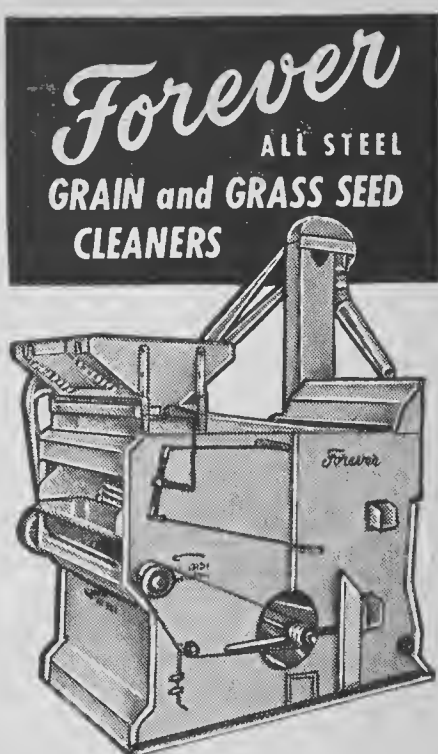
The dessert consisted of pulped fruit slightly diluted with water and supplemented by sugar and small amounts of gelatin and ascorbic acid. These materials are mixed and aerated by a paddle beater. It is learned that fruits prepared in this way will retain their natural colors and that the flavors also will be natural. Some fruits prepared in this way are more suitable for dessert use, while others, such as the black and red currant, may be preferable served with meats.

W. R. Phillips and W. MacArthur of the Horticultural Division, Dominion Experimental Farms Service, advise that the mix can be frozen at 20 degrees below zero and stored at zero temperature.

The Department was primarily interested in conserving food when developing this idea, since much fruit is wasted, especially at times when crops ripen rapidly in warm, muggy weather. Under such conditions, an ordinary week's supply of fruit may ripen in a couple of days, and if marketed immediately some of it is likely to go bad even when offered at lower prices.

It is suggested that commercial growers, when faced with a temporary surplus, could pulp and freeze the fruit immediately, and add sugar and the gelatin later.

Those who witnessed the demonstration believed that the dessert made of rhubarb has the most promising commercial possibilities since it combines attractive color, flavor and probable low cost of raw materials. It is not known whether the process could be used or adapted to farm use, though doubtless this will come in time for those who have ready access to frozen food storage or have installations of their own.



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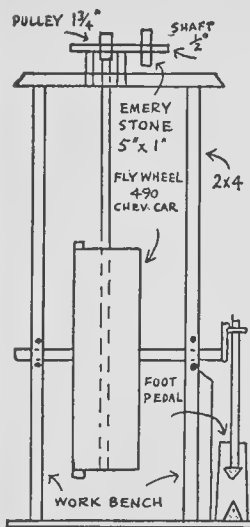
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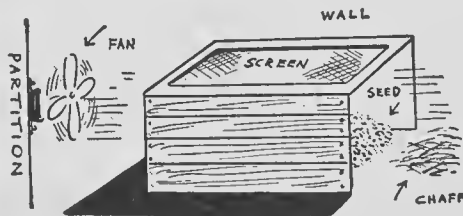
Foot Grinding Wheel



A foot grinding wheel, using an old Chevrolet fly-wheel, gives more speed and is heavy enough to carry past dead centre. I use a five-inch emery stone on a one-inch shaft, mounted on the work bench. On the shaft is a 1 1/4-inch pulley with a slot directly underneath for the drive belt. This grinder gets a lot of use and runs very easily. The 490 Chevrolet fly-wheel is mounted between two 2x4's directly under the emery wheel shaft. —D. McGratt.

Cleaning Chaff From Clover

If you have a four-bladed fan, you can rig up a simple method for cleaning chaff from clover seed. Fasten a 2x4-foot window screen to a wall about three feet from the floor, length-

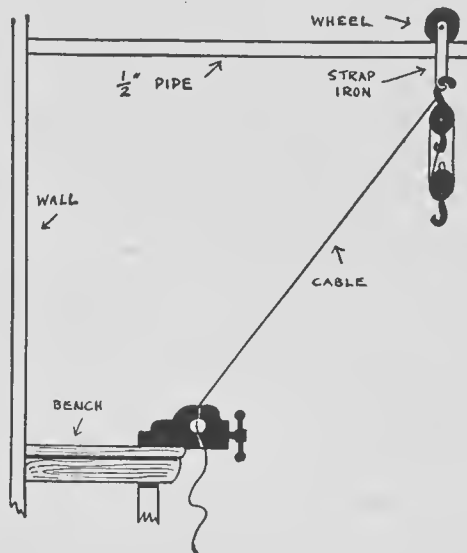


wise to the wall. Board up the other side of the screen to make a tunnel, and arrange the fan to blow through under the screen either with power from a small motor, or from an engine and belt. Pouring the unclean clover seed on the screen and working through by hand, allows the seed to fall and the fan to drive the chaff out the other end. —Allan Scott.

Travelling Workshop Crane

One man working alone often finds it hard to take off and replace engine heads. Especially hard is replacing the head so the stud bolts and rods come through the proper places without jamming the gasket.

A one and one-half inch heavy pipe used as a track, with a four to six-inch-diameter wheel on top and the tackle attached to the wheel by a piece of scrap iron, will make a travelling crane to carry several hundred pounds.

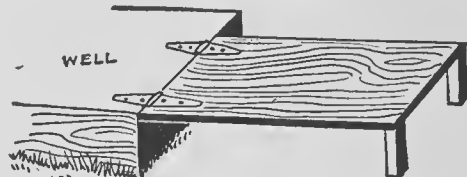


If no wheel about the same width as the pipe is available, one can be turned out of hard maple. Bush the shaft-hole with a brass tube and ream to fit the

cross machine bolt, so as to make it run easier. Using a crane of this type saves a lot of back strain in moving heavy parts from the engine to the bench and back again. When necessary to let some part hang in the air, the tackle rope can be held by the vice. A stronger crane wheel and tackle would enable an entire engine to be taken out as a unit. —W. S. Thayer.

Handy Pail Rest

Water for the household still must be carried from the well on many farms. When the ground is muddy or covered with snow, it is hard to keep the bottoms of the pails clean, especially if two pails are carried and one



must be set down while the other is filled. A board hinged to the top of the well cribbing, with legs at the outer end, can be tipped over on top of the well when not in use and thus kept clean. Care should be taken to attach it to the most convenient edge of the cribbing, and where it will be least in the way when not in use.

Leather Knife

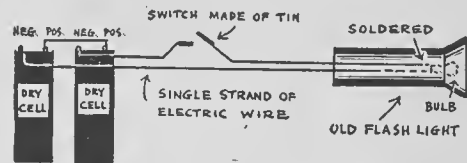
Every purpose for which a knife is used, almost, requires a special design. There are hundreds of knife designs. There is one that can be made



for cutting leather. It will also cut paper and cloth. The sharp cutting edge is rounded and presses the material down instead of pushing it ahead and making a bad cut. —C.D.R.

Home-Made Electric Light

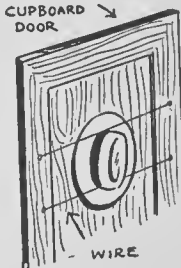
Using an old flashlight, two dry cells, a small flashlight bulb, solder, a couple of short pieces of tin and a couple of pieces of single strand



electric wire, an 11-year-old boy made an electric light suitable for lighting a closet or for use as a night light in a bedroom. This home-made electric light is safer than matches and handier than a flashlight. The diagram is sufficiently explanatory that anyone can follow it. —Walter Anderson.

A Good Hatrack

A good hatrack or holder for the back of a door can be made with four long screw eyes and two pieces of small wire. Stretch each piece of wire through a pair of screw eyes, and fasten them about nine inches apart across the inside of the door as shown in the diagram. —F. L. Featherstone.



Making A Flower Bloom

The blooming season of many varieties can be altered by changing the supply of light.

by ALFRED HARRIS

HAVE you ever wondered why some flowers bloom in the spring while others bloom in the fall? Well, thanks to recent research, scientists now know the factors that control the time of blooming, and this discovery promises to have far-reaching results.

It all began in an autumn 25 years ago when a number of ordinary Iris plants were grown in a greenhouse. One half of the plants were grown in the ordinary way. They received the same kind of care that Iris plants have been receiving for decades past. The other group of Iris, however, were subjected to a special type of treatment. They were given an "artificial" day. When the first group of Iris were receiving less and less light each day because the coming winter brought a longer night with it, the second group were illuminated artificially for a short time after the sun went down. Thus they were being given the equivalent light of an ordinary spring day.

This treatment went on steadily. As the day became shorter and shorter the artificial lighting systems were turned on earlier and earlier, keeping the length of the "artificial" day equal to what it would be in the summer.

The months passed, and as they did the first group of Iris made the usual progress. They blossomed at the usual time in the following spring. But a very unusual thing happened to the Iris that were receiving extra light each day. They had bloomed by the time Christmas had rolled around!

This result, of course, led to further research. Soon it was found that the Cosmos acted quite differently when treated in the same way as the Iris. It was found that the Cosmos, a plant that ordinarily bloomed in the fall, didn't bloom at all when under a "long light day." That is, when its daylight hours were lengthened by the use of artificial light. They found, instead, that its stalk increased in size. Of course, this discovery led directly to another experiment in which the amount of light received by the Cosmos during the day was decreased. In other words, it was put on a "short light day." Under this treatment, the flower did bloom earlier than usual, but unlike the Iris, it produced an undersized stalk.

Similar experiments were tried with many other species of flowers, and it was found that although most either bloomed on a "long light day" or a "short light day" some did not fall into either category. That is, shortening their "light day" had no effect on their growth. Those flowers like the Iris that required a long day of light were called "Long Day Bloomers," while those like the Cosmos that bloomed only under a short period of light were called "Short Day Bloomers."

SINCE that time 25 years ago these experiments have been repeated many times, and on each occasion the results have been the same, until today we have floriculturists who are apply-

ing the method to commercial enterprises.

Already some florists are presenting such plants as Chrysanthemums on the markets as much as two months earlier than usual. Poinsettias that formerly could only be had around Christmas time can now be made to bloom in the summer. In short, we may soon have any flower we want at any time of the year!

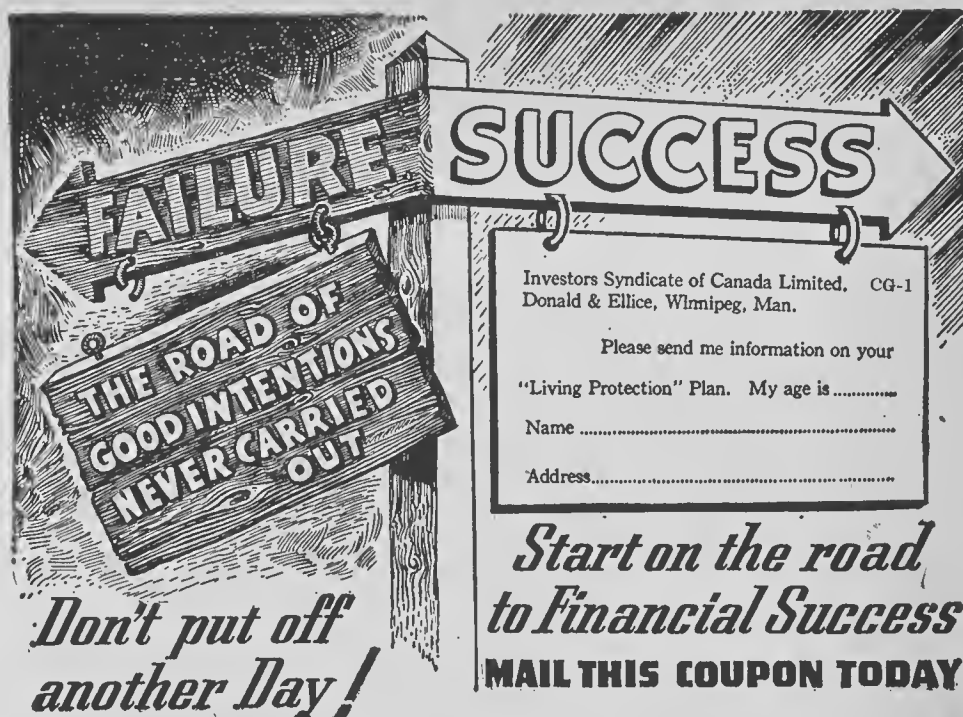
In the past florists were always confronted with a gamble. Would such flowers as the Easter Lily be ready for Easter Day when they were wanted? Or would they bloom too early or too late so wasting many, many dollars? Other special holiday flowers presented the same problem. There was no way of telling when to plant them so that they'd bloom at the right time. And so there was no way of making sure they would not go to waste. At its best the growing of these flowers was a risky business. And because of this risk florists never planted a great many with the result that there were never quite enough to go around. This caused the price of those available to be quite high.

But now that there is a sure way of making these plants bloom at the proper time, the risk is gone, and so there should be plenty of holiday flowers in the near future.

THERE is one other aspect of this development that is important, although not directly to the average man. It is the use to which science will put it. For a long time scientists have wanted to cross-breed certain plants. However, if these plants happened to blossom in different seasons cross-fertilization was impossible because the pollen of one plant would not be available when the other plant was ready to receive it. Now however, with this new method, both plants can be made to bloom at the same time, thus allowing cross-fertilization. Because of this one aspect alone the discovery of how to make a flower bloom is important to the world.

The method by which the bloom can be controlled is a simple one. As mentioned before it merely consists of increasing or decreasing the amount of light a plant receives within a day. Ordinary electric light bulbs suspended over the plants are all that is needed to supply the light; while an ordinary box, or piece of black cloth is all that is used to cut off the light. Of course these methods can be used outdoors as well as in the greenhouse. Thus an outdoor plant that ordinarily blooms in the late fall can be made to bloom much earlier by merely placing a box, or a black cloth over it each evening before sunset to make the light it receives during the day equal to that it would receive during the shorter fall day.

As yet there have been no public attempts to apply this method of controlling growth to plants other than flowers. Whether or not we will be able to use the principle of the "Long Day Bloomers" and the "Short Day Bloomers" in the fields and gardens is something we will have to wait to see.



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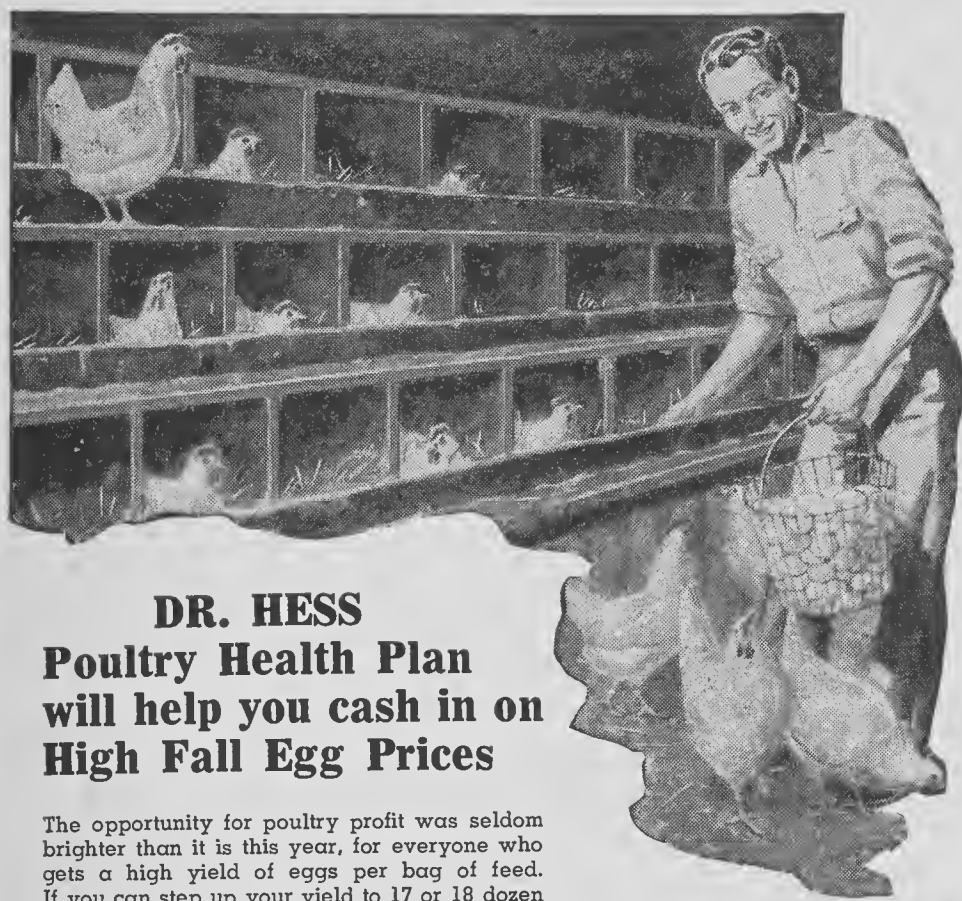
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Egg Prices Again

IN the July issue of The Country Guide the writer of this column offered a few observations regarding current egg prices and possible trends. It is always a bit tricky to prophesy, especially regarding markets and price trends, which was no exception in this instance. Shortly after this paragraph appeared two important changes took place in the price structure. The first was with regard to express rates. In this case the minimum rates were substantially reduced from the level established by the freight increase allowed by the Board of Transport Commissioners. This reduction in the basic rate came about as a result of certain representations made to the Express Traffic Association by the organized poultry associations on behalf of the industry as a whole. The second event was the raising of the paying price of eggs to the producers to the extent of .05 cents per dozen on Grade A eggs. Ordinarily a .07 cent a dozen increase could have been expected as at September 1 but owing to certain economies effected in the handling of the export eggs a portion of this anticipated increase was made available to producer at an earlier date.

Then, as predicted, a further price rise occurred in August due to increased consumer demand and to reduced production. During August prices were above those at which the Special Products Board could buy eggs for export. When production increases beyond domestic requirements prices will become adjusted to export levels. It is hoped that this short explanation will clear up any possible misunderstanding of the original paragraph.

Killing Chickens For Market

MORE and more of the market poultry in Canada is sold on a rail grade basis. This method of selling allows for the killing and processing of the birds in licensed killing plants where the operation can be carried out under controlled conditions. Generally speaking a better job is done in such establishments than is possible on the average farm. If chickens are to be killed on the farm to satisfy some particular market outlet, care should be taken to ensure that only the well finished birds are killed; poor birds always depress the market. All unnecessary rough handling should be avoided in catching and crating the birds.

The birds must be starved from 24 to 36 hours before they are killed. During warm weather the birds should be offered a drink of clear, fresh water during the starvation period. There are various methods of bleeding and sticking. Bleeding may be accomplished by inserting a knife into the mouth and cutting the jugular vein. In some cases the jugular vein can be severed by cutting the throat on the outside just behind the lower jaw (Kosher style). The nerve centre which controls the tension of the feather follicle muscles is located in the brain, therefore this nerve centre must be destroyed if easy plucking

is to be expected. This is done by inserting the knife into the brain cavity either through the cleft in the roof of the mouth or through the sinus immediately back of the lower corner of the eye. It is very important to get a complete bleed, otherwise the carcass will be unsightly and will have very little sales appeal. To this end a one-pound weight attached to the lower beak is very helpful. The weight is attached after the bird is killed and before plucking is commenced. Cool the carcass as quickly as possible after killing and plucking.

Community Nests

BEFORE the pullets are moved into their winter laying quarters, every effort should be made to see that everything is clean and comfortable for them. Particular attention should be given to the nests and nesting arrangement. Birds are creatures of habit and when they come into production they seek out a suitable place to lay. This favored nest should be clean and offer a certain amount of seclusion while the bird is laying. At one time nests with separate sections were advocated. The problem with these nests was that too many hens fancied the same nest. The result was broken eggs, smeared eggs and the development of the habit of egg eating by the hens themselves. In a circular prepared by the Swift Current Experimental Station a newer type of nest is described, which is known as a community nest. One such nest is large enough to accommodate 50 hens. As stated in the circular there are four advantages of this nest over the single compartment nest. These are (1), the tendency for more than one bird to crowd into one nest is eliminated; (2), broken eggs are reduced to a bare minimum; (3), the number of dirty eggs is reduced, and (4), the collection of eggs is facilitated. Copies of the circular can be obtained by writing to the Experimental Station at Swift Current, Saskatchewan.

Dubbing Cockerels

EVERY year almost without exception the weatherman decides to send along a dose of severe weather right in the midst of the hatching season. At this time many male birds and some of the hens become frost bitten. The combs and wattles are the parts most generally affected. If these parts become frozen, it is not long before considerable pain develops and very soon fertility begins to decline so that three weeks later the lower hatchability is reflected in poorer returns from the hatchery. Much of this loss could be avoided by dubbing the male birds in September or early October. This operation is quite simple and very few losses are experienced if the dubbing is done before the cold weather sets in and if not more than two thirds of the comb and wattles are removed. Dubbing shears are best but any ordinary scissors can be used to perform the operation. Some bleeding may occur but it will stop quickly without applying astringents.

Converting Alkali Into Dollars!

Continued from page 7

the lake itself. The year's crop of salt water can be harvested in two weeks. As summer heat evaporates some of the saturated brine in the reservoirs, more is pumped in.

Nature does the rest. Come November the brine temperature drops to 29 degrees Fahrenheit, throwing the crystals to the floor. The spent brine is released and flows back into the lake. As the reservoirs are more than twice as deep as the deepest part of the lake, the salt crust is more than twice as thick. Drag lines can now operate, and trucks haul away the crusted floor. Bulldozers build it into two stock piles each 1,000 feet long and 140 feet across at the base. The traveller on the highway can see their gleaming tops miles away. This spring 350,000 tons of alkaline salt awaited the next step in manufacture.

THE stuff in the stock piles is not yet commercial salt cake. Live-stock men know it as Glauber's salt, and administer it to constipated cows in one pound doses. Each crystal has locked within it 56 per cent water and 44 per cent sodium sulphate.

If you were to spread it out thin in the dry Saskatchewan climate the crystals would break down. The water molecules within the crystals would evaporate leaving the typical white alkaline powder, in this case the dehydrated form of sodium sulphate.

Mr. Holland worked out a more practical way of concentrating it than spreading 350,000 tons out thin on the prairie. A moving hopper between the two stock piles feeds the salt on to a two-foot conveyer belt 2,225 feet long. The belt carries it to a steel receiving bin inside the factory from where it is conveyed by screws into one of four Holland evaporators, and from thence to 60-foot rotary driers.

Were this an engineering journal it would be appropriate to describe the new features incorporated in these dehydrating contrivances. Enough to say that they are heated by burning oil and utilize the last practicable vestige of heat. Smoke stack thermometer readings are lower than the temperatures of the politicians who condemned this plant as an unwarranted invasion of the field of private enterprise.

The plant employs 70 people the year round, but never a shovelful is lifted by hand. From the flow of brine in the channel to the sealing of the freight car doors, the job is mechanized.

THE salt cake turned out by this process is certainly the purest thing of its kind produced in Canada, and that is probably taking in too little territory. The first carload left Chaplin bound for a New Brunswick paper mill on May 14. By June 1 the purchaser was anxious to increase the size of his contract by 67 per cent.

When the trade discovered that the government plant was turning out a salt cake over 99 per cent pure sodium sulphate, orders began pouring in from foreign buyers. The Swedish government alone endeavored to make a contract calling for a volume as big as the combined production of the Chaplin plant's two largest Sas-

katchewan competitors. But the policy of the mill is to look after Canadian customers first, earn American dollars next and to look after other business afterward.

In view of criticism which is frequently directed against publicly-owned plants competing against private capital, it is worth while commenting on the price policy followed by the directors of this enterprise. The ruling price for ordinary run-of-the-mill salt cake was about \$12.50 a ton when the Chaplin plant began taking orders. It is substantially more now. The high quality stuff turned out by the Holland process could command a handsome premium. Yet the Chaplin plant has persistently refused to exploit its advantage. It has adopted the arguments behind the late, lamented world wheat agreement. It has preferred long-term contracts at a satisfactory price to taking all the traffic will bear. Mr. Holland and the government men behind him are looking forward to a time when salt cake, and other commodities, will no longer bring swollen prices.

The easy success attained in selling the output makes it apparent that it would be just as easy to sell 250,000 tons a year as the 160,000 for which the plant was designed. But the directors refuse to expand. The lake will last for 45 years at its planned rate of depreciation. Expansion would exhaust it sooner raising the calculated rate of depreciation. Besides, the department officials are more concerned about the success of their opposition than they will ever get credit for. It would be to everyone's advantage for the privately-owned plants to succeed. It is hoped that the Chaplin plant will be regarded as a model and its methods copied.

LOOKING into the future, Saskatchewan should be able to count on a steady income from this natural resource for many years. It is estimated that her alkaline sloughs contain 200 million tons of exploitable alkali. The total American production in 1938 from all sources, by-product as well as direct extraction, was 335,000 tons, not much more than Saskatchewan is now producing annually. The world demand is increasing. The only considerable natural deposits are in Chile, Bohemia and Russia. The Iron Curtain now shuts off the natural supplies from the manufacturing centres of Europe. They cannot be satisfied with the amounts of salt cake produced as a by-product. Saskatchewan is sitting pretty.

The future control of the Saskatchewan plant is not so well secured as its market. Development of natural resources by crown companies is by no means settled policy with all the political parties in the province. Political changes might lead to a sale of the Chaplin plant. In some future time it might be a handsome plum for an industrial concern which had invested its party contributions wisely. There is no lack of precedent in Canada. The sponsors of the sulphate plant say, "It can't happen to us. Before the end of the present day government's normal life, the salt cake plant will have established a profit-earning record that would make any government hesitate to dispose of it, no matter how fervently it believed in private enterprise." Perhaps they are right. Time alone will tell.

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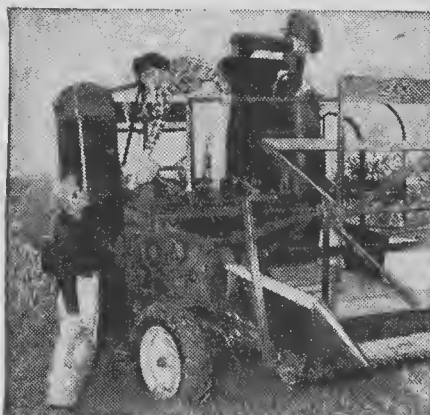


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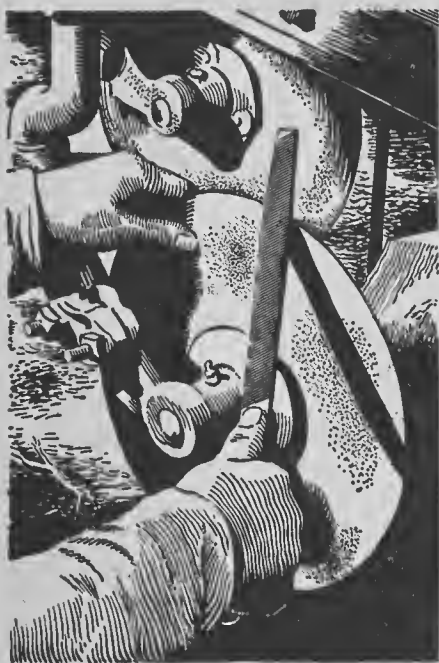
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17-46

Future Farmers At Work And Play

Continued from page 11

organizes a number of clubs—farm mechanics club, agronomy club, literary club, livestock club.

Students may follow their own interests in deciding which club to join. The aim of the clubs is to provide a channel for individual expression of interest and talent along the student's chosen lines, and to divert the individual member's accomplishments to a conclusion so that they might afford some practical assistance to each member of the club. These clubs have flourished and the interest and enthusiasm of the students must be seen to be believed. The clubs form a vital element in the total program of the school year.

The student executive is also responsible for the publication of a school paper. An editor and staff are appointed and they publish a mimeographed paper every two weeks. The writing, editing, proof-reading, printing and financing are done by the students.

ONE of the members is an athletic director, and he arranges the sports program. Bowling, basketball, hockey, curling and other sports are pursued with enthusiasm. Those not interested in any of these activities also have the opportunity of taking part in competitive public speaking or debating. The choice in the field of extra-curricular activity is wide and varied.

Perhaps the highlight of the year in the student program is the Little Royal. This is an exhibition and show put on by the students. It consists of booths put up by each of the clubs indicating aspects of livestock production, farm libraries, farm mechanics, grain production and the like. The big feature is the showmanship competitions. The contestants select their own animals from the University barns and must prepare and show them. Grain samples are prepared and shown in the same way. The entries are judged on the basis of showmanship rather than quality or finish. Literary competitions are held, and last year the Saskatoon paper published the winning entries. Competitions in radio broadcasting and public speaking are also conducted. Cups are donated by downtown commercial firms, and these are presented to the winning contestants.

Each year a curriculum committee is set up by the students to tender constructive criticism of the courses offered from the student's point of view. This year's committee wrote in part: "It is felt that the two-year Diploma course of the School of Agriculture is excellent as an aid toward better farm living. The course is very comprehensive, giving the maximum of practical information. In general it can be said that this course is very essential to all young practical farmers, giving them information which will enable them to become better farmers and better citizens." Their report went on to make adverse or favorable comment on each of the courses offered.

All of these student activities train the students in leadership, and help them to think for themselves. They

have an added value in that the students gain confidence, and also gain a sense of playing a vital and personal role in the school program of education and leadership training.

The school will register anyone who is over 17 years of age and who has completed grade eight. The tendency is for young men to come but older, established farmers are welcome. "If a farmer 70 years of age wished to take the course we would be delighted to see him," said the director. In point of fact, considerable effort is being made to encourage somewhat older farmers to attend, as it is felt that they have the experience and maturity to learn a great deal from the courses,



W. B. Baker

and to contribute a great deal to the student program. Girls are also welcomed, though in the past relatively few have attended.

Last year was unique in several ways. The largest number of students ever to register in the school were in attendance, to a total of 252. This spring the graduating class was the largest ever to graduate in one year. The average age was also high compared to other years, probably due to the large number of veterans in attendance. Also, more students registered from outside the province. Five students registered from British Columbia, two each from Alberta and Manitoba, one from Ontario, and one from Venezuela, South America.

The future of the school looks very bright. At the present time a school of agriculture building is being put up on the campus. It is for the exclusive use of the school students. The building is designed to house 190 students. Accommodation is being provided for a resident warden. Modern offices are incorporated for the teaching staff. A library room is provided for the use of the students, also a common room

where residents can play cards, read or talk. A recreation or games room is being incorporated. A large auditorium and adequate lecture rooms are provided. A kitchen and cafeteria will be provided. A useful feature is the provision of a tuck shop or canteen. This canteen will be run by the students as a co-operative. This will provide practical training in co-operative principles and practice. Three rooms have been set aside on the top floor for student executive offices. Here the Saskatchewan Vocational Agriculturalists' Association will hold their meetings and plan their extensive program of student activities. In view of the fact that the student activities are such a very integral part of the school program it was felt that it was important to provide office accommodation. "The president of the S.V.A.A., in terms of responsibility, is pretty much the equivalent of any teacher on the course," stated Mr. Baker.

THE new building will be ready for occupation in a little over a year. The possibility of opening a girls' school is now under discussion. If sufficient demand develops, such a course may be started. It may be that it will be a farm homemaker's course, or it may be this combined with typing and shorthand. The building is designed to permit the addition of a wing to serve as a girls' residence. At best, no girls could be started for several years.

Many people deserve credit for the growth and development of the School of Agriculture. Faculty members in the College of Agriculture have been aiding its growth for 35 years. Special mention must be made of Prof. J. W. G. MacEwan and Dr. L. E. Kirk, both past directors of the school, and Dr. V. E. Graham, the present agricultural Dean. W. B. Baker, the present director, has also made a very positive contribution. Thirty-five classes of students have planned and worked for a better school.

Mr. Baker is still in his late twenties yet he has built up valuable experience in the field of agricultural education and extension work. He took an early interest in Junior Club Work in his home district at Verigin, Saskatchewan. He was leader of the Verigin Junior Grain Club in 1937 and 1938. In 1938 this club was awarded the Wheat Pool Trophy in the provincial club efficiency competition.

In 1938 he registered in the School of Agriculture, receiving his diploma two years later. He continued in the college and received his Bachelor of Science of Agriculture in 1944. During the summer months of these years he worked on the University Field Husbandry plots and spent two summers with the Dominion Economic Survey.



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In the winter of 1943-1944 he instructed in English and public speaking in the School of Agriculture.

Following graduation he was acting provincial superintendent of Farm Boys' Camps for the University Extension Department. He was also the secretary of the Saskatchewan rural section, Canadian Youth Commission. In the fall of the year he accepted the position of assistant director of the school under Dr. L. E. Kirk, becoming director in July, 1947. During these years he has done extension work, and also spent two summers at the University of Minnesota studying rural sociology.

The School of Agriculture is very near to Bill Baker's heart. Past graduates and present students pass through his office in a steady stream. Records are kept of all students, and after they return to the farms every effort is made to keep track of their progress. This is often made easier because very few of the graduates come to Saskatoon without dropping in at the old School of Agriculture office to see how everyone is getting along. The graduates have pleasant memories of a happy and profitable time at University of Saskatchewan.

Angoras Do Pay Off

IN the March, 1948, issue of the Country Guide I read with considerable amusement the article entitled "Do Angoras Pay Off?" I am under the impression that the writer of this article is blaming the business rather than the management. If the Angora business were not a profitable one—as this writer seemed so eager to stress—the breeders would go out of business, whereas today, when prices of wool are at the lowest in a number of years in comparison with the feed cost, many breeders are increasing their herds and newcomers are entering the field. Those that find Angoras hard work with little profit have only the management, in most cases themselves, to blame.

In the first place, this pessimistic writer of your March issue is wasting too much time feeding her Angoras. In the second place, the trouble appears to be in faulty pen construction. Thirdly, the writer is not handling wool properly. She is taking too much time doing it.

Pen construction should be in such a manner that the rabbits are warm in winter and cool in summer. The pens should be airy and sunny, but should protect the rabbits from rain, snow, or any other weather hazards. In this way it is unnecessary to clean hutches more than once per month. This cuts down on time. Arrangements should be made so that it becomes unnecessary to open doors at feeding and watering time.

Experienced breeders are able to pluck rabbits in as little time as 20 minutes and get around 85 to 90 per cent No. 1 wool with remainder in No. 2 and No. 3 wool with very little or no mats, realizing a return of \$6.50 to \$7.00 per pound on the average. The cost of feeding may vary a bit. Wherever alfalfa can be grown it means an entire year of green feed supply for only a few days' work. With a cost of \$1.00 to \$2.00 per rabbit for feed, the profit should be at or near \$5.00 per rabbit from good woolers which produce approximately one pound of wool each per year. —C. E. Waldner.

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MONTHLY COMMENTARY

Equalization Fees Abandoned

With the beginning of this crop year the Canadian Government ceased to charge equalization fees for permits to export oats and barley. That change was made concurrently with the opening of the American border to export shipments of Canadian cattle and beef.

Export permits are still required for oats and barley, although they are freely issued without charge. That, apparently, is to enable Canadian grain exports to be reported to the International Emergency Food Committee and also to enable the authorities to keep track of foreign exchange earned by grain exports.

Equalization fees, during the past crop year, served a double purpose. By keeping them at a high price they constituted a limitation on the exports of grain, to ensure that sufficient supplies would be available to meet Canadian needs. In that respect they replaced the complete embargo on exports of oats and barley which prevailed at the beginning of the season.

The other aspect was that of price control. When exports first began to be allowed in the early months of 1948, such fees were extremely high, up to \$1.30 per bushel for barley and 65 cents per bushel for oats. They were gradually reduced during the crop year, with occasional upward reversals. They prevented demand from the United States from putting Canadian prices up to levels that otherwise would have been reached at a time when there was a strong demand from the United States for both oats and barley. By the time they came off, prices south of the line had declined greatly, in view of the large crops of feed grains produced this year. Eastern farmers who had benefited by the restriction of prices no longer have anything to fear as a result of demand from the United States being allowed to exercise its full influence in Canadian markets.

Western Canada is producing this year a considerable surplus of coarse grains. Crops have been excellent in eastern Canada, very much better than last year, and an export outlet for both oats and barley is urgently needed. At prices recently prevailing for such grains, and for livestock, feed grain prices have been low, and there is no doubt that purchasers could afford to pay considerably more. However, the existence of an export surplus will keep the price down to what can be obtained in export markets. Very largely, therefore, prices for oats and barley will be governed by price levels prevailing in the United States. Some export of malting barley south of the border is likely and so also is export of feed barley to European countries. In either case the American price level is likely to be the ruling factor. European buyers will not pay more for Canadian grain than they would have to pay for corresponding supplies in the United States, and supplies available are sufficient to ensure buyers a choice in this respect.

U.S. Government Price Support

Price declines on American markets have been the inevitable result of the plentiful supply of all grains.

Such declines would probably have gone further except for the price sup-

port program of the United States Government administered by means of loans. The law requires the government to offer non-recourse loans to farmers, based on 90 per cent of parity prices which are recalculated from time to time to cover changes in farmers' costs. At the present time the loan value of wheat, for example, is about \$2.00 per bushel at country points, somewhat more than \$2.20 per bushel at terminal points. A farmer can put his grain in public storage or in sealed storage on his own farm and obtain a loan. The loan does not need to be paid off because if the farmer cannot sell for more than the amount of the loan he simply surrenders his grain at the due date to the government. Alternatively, the farmer may make a sales contract with the government which gives him the option of delivering wheat at a later date at the loan value.

This loan plan has not prevented market prices from falling below the loan basis. Several reasons might make a farmer willing to sell on such a market rather than take a loan. He might fear a loss of condition of his grain; he might have inadequate storage space on the farm. Also, he might prefer not to sign a loan agreement for fear of incurring obligations to reduce his crop acreage, if demands for such reduction should later be made. The government may not resell grain it acquires under the loan plan, in the United States, at less than cost, but may export such grain. Large quantities of wheat have already been tied up under the loan and much larger quantities are likely to be so handled.

This year has provided a severe test of such a method of supporting prices. Many persons in the United States consider that the support levels are too high and before another year Congress is likely to be faced with demands to lower the loan basis in the hope of bringing about price reduction and a lowering in the cost of living.

Heavy Crops In United States

The tremendous crop production in the United States is the most important feature of this year's grain marketing picture. Never before has so much grain been produced in that country. If history is any guide, this year's record is likely to remain unchanged for some time. That statement can be made mainly because weather conditions that favor corn are seldom those which are most favorable for small grains. The latest estimate of the United States wheat crop is 1,242,000,000 bushels, which is 123,000,000 bushels below the all-time record crop of 1947. Except for 1915 it is only during the past few years that United States wheat crops have exceeded 1,000,000,000 bushels. High prices, considerably higher than those prevailing in Canada, have stimulated every possible effort towards production, and the weather has been better than could have been hoped for. Earlier, the prospects appeared to be for a much smaller winter crop. Conditions last fall and in the early spring seemed to be unfavorable to winter wheat, and over great areas the plant made very small growth. Late rains, however, resulted in great

areas producing heavy yields on their straw, so that the full extent of recovery only began to be realized from threshing returns.

This year's corn crop is estimated by the government at 3,500,000,000 bushels—by far the greatest on record, and private observers think the crop may be even larger. In previous years, a 3,000,000,000-bushel crop was considered very big. In earlier years such weather as was experienced this year would not have resulted in such a big crop. Yields per acre have been greatly increased during recent years, since the introduction of hybrid seed, which has a most remarkable vitality. New hybrid seed has to be produced each year by crossing two favored varieties. Such work is arduous, as it requires the clipping of the tassels of one variety before pollination. Because corn is a cross-pollinated plant, hybridization can be conducted on a field basis instead of on the very limited scale which prevails when scientists cross two varieties of wheat or other small grain.

The United States crop of oats is estimated at 1,500,000,000 bushels, larger than ever before. New varieties introduced during the past few years have been outyielding old varieties because of immunity to various diseases and the ability to stand very hot weather. Other grains, including flax and sorghums, have all yielded well.

As a result of the big yield, the United States Government plans heavy wheat exports to Europe, financed under the Marshall Plan, perhaps 450 million bushels in all. That is thought to be close to the practicable limit since the volume of exports is governed not only by plans for financing but also by the capacity of the transport system to move grain.

In all probability some considerable exports of corn will be made, because Europe, now that the food situation is easing, wants to get livestock production restored, for which imports of feed grain will be necessary. Even so, however, the United States will be left with a greater supply of feed than can be absorbed by the present livestock population. During the past two years when feed was scarce and prices were high, the number of both hogs and cattle were seriously reduced, and it will take time to restore them. Even now, when plentiful feed should be encouraging farmers to increase their livestock operations, they are tempted by very high prices prevailing as a result of meat shortage, to market stock that otherwise might be held for feeding and breeding purposes.

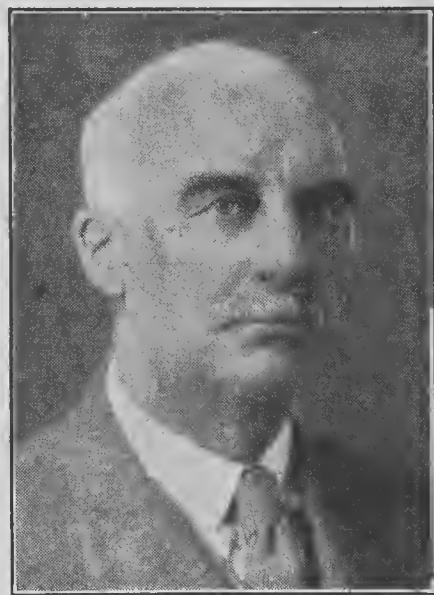
Such heavy production holds out to the people of the United States the promise of abundant supplies of meat in the future, and of prices for meat lower than the extremely high levels which have prevailed. It will, however, take time before those hopes can be realized. In the meantime prices for all grains have dropped considerably.

So far as Europe is concerned, this abundance in the United States, coupled with quite good yields realized in Europe this year, makes the food problem much less acute than it has been. Total supplies of food are still inadequate as measured by total needs for a satisfactory diet.

They are, however, fairly large when supplies available for shipping are measured against the possibilities of payment by different countries.

The Late F. J. Collyer

The death, in his 84th year, at Welwyn, Saskatchewan, on August 14, of F. J. Collyer, marks the passing of one of the pioneers and stalwarts of farm organization in western Canada. Mr. Collyer's family had been farmers on Romney Marsh in Kent, England. He had been educated at the Merchant Taylor's school in London, and had started on a career as a Royal Navy engineer student, when, at the age of 17, in 1882, he came to Canada with his father and brothers to engage in farming. After a brief experience on land near Fort Ellice, he took up the land he continued to farm in Manitoba, just at the Saskatchewan boundary line. For a few years commencing in 1893 he was associated with the Patrons of Industry, a farm organization which had spread to the West from Ontario. Later, in 1902, he helped organize one of the first, and a very successful, local Farmers' Co-operative Elevator



F. J. Collyer.

Company, which, in 1927, was absorbed into the elevator system of United Grain Growers Limited. He served continuously on the board of directors of the Grain Growers Grain Company and United Grain Growers Limited for more than 30 years, commencing in 1912.

For many years Mr. Collyer took a very active part in the work of the Canadian Council of Agriculture and was recognized as the Council's expert on livestock marketing. He was one of the organizers and the first secretary of the Canadian Aberdeen Angus Association, and served as a director of that organization for nearly 20 years. He was one of a delegation sent by United Grain Growers Limited to England to study marketing of Canadian cattle there, and out of his work grew the co-operative export of cattle successfully conducted by the Company during several years.

Mr. Collyer's courtesy and charm of manner brought him many friends, while his deep study of farm problems enabled him to exercise a strong influence on any deliberations in which he joined. He was greatly interested in the history of western Canada, and a well-known collector of historical books and records.

It Began In A Coffee House

Few names are so often quoted as "Lloyd's" and few businesses are as little understood.

by DAVID E. NICHOLAS

BY the end of the XVII century, when coffee houses were centres of social and commercial life in the City of London, a man with the Welsh name Edward Lloyd used to serve coffee behind the counter of a shop in Tower Street. To this shop came many business men; they sipped their coffee (costing one penny) and exchanged news. It is there that the first insurance transactions were made. Newspapers were supplied, gossip (particularly on marine matters), mingled with genuine reports; and so from this haphazard start there grew up the oldest and greatest insurance corporation of the world, Lloyd's of London.

Little did the Welshman think that one day his name would be famous in five continents. Edward Lloyd who opened his modest premises in Tower Street in 1689 and later transferred the business to Lombard Street was not concerned with future history. He would certainly be astonished to see the sumptuous building in Leadenhall Street—the home of Lloyd's of London today—which now bears his name. But, really, he was not the founder of Lloyd's; no chairman of an insurance business. He was a simple coffee brewer; but the insurance corporation of Lloyd's—after taking his Welsh name—grew, so to say, out of his coffee house.

Lloyd's is an Insurance Corporation, not an Insurance Company, like all the others; neither is it a Shipping Company, like "Lloyds" all over the world who took the same name. It is the meeting ground for business men who individually underwrite risks for applicants, and is connected with shipping only in as far as about 50 per cent of the deals are about the risks of the sea. The rest consist of all other normal insurances, excepting life insurance.

Few people know that today Lloyd's is the foremost institution for insuring film stars against accidents. Olivia de Havilland's jaw was insured for £25,000 during the making of a film in which Ray Milland was to hit her; Fred Astaire took out an insurance for £200,000; starlet Janis Carter's eyes were insured for £250,000; and recently Lloyd's under the terms of a £250,000 insurance policy, have refused Dorothy Lamour permission to fly from Hollywood to Washington during the making of a picture. "Scarface" policies they are called in Leadenhall Street.

Lloyd's dislike publicity—though it uses a bell as its main symbol. This "Lutine" Bell hangs in the rostrum of the main Underwriting Room at Lloyd's. It is used to obtain silence for important news of overdue ships on the high seas; one stroke for bad, two strokes for good news. It comes from a British warship, the "Lutine," which was wrecked off the coast of Holland in 1799. The Corporation of Lloyd's where this ship was insured, salvaged some money and the bell.

The money was little, but the bell became famous. Sixty years later, a chair was also recovered. This chair is a magnificent, but rather uncomfortable piece of furniture. No wonder: It was made from a rudder. Only the chairman of Lloyd's is privileged to sit on it.

The question, "What is Lloyd's?" has been asked by many. Lloyd's being a typically English institution, defies any clear-cut definition. The best answer was once given by a high official of the Corporation to a lady visitor: "Individually, Madam, we are Underwriters; collectively we are Lloyd's." The Corporation does not subscribe policies of insurance; that is the business of Underwriting Members. An Underwriting Member is a wealthy man of unimpeachable character, who takes the risk—himself or more often through an agent. The entrance fee for a new Underwriting Member is now £500.

The corporation of Lloyd's consists today of 1,248 Underwriting Members, 95 Non-Underwriting Members and Substitutes. Though no responsibility rests upon the Corporation for the default of an individual member, the general body of the members do not look with indifference on the failure of anyone of them. Between the two wars a man was admitted to Lloyd's who, in his personal affairs, which had nothing to do with Lloyd's, dealt fraudulently. The members of Lloyd's paid half a million pounds to persons who lost money through the fraud of the one black sheep. This was done voluntarily, and without dissent.

AS in the days of Edward Lloyd, the Underwriters sit today at coffee house tables. The brokers offering business pass up and down between them. The broker has in his hand a "slip." Each Underwriting agent inscribes the "line" taken by his group, and the "slip" thus forms the basis of the policy.

The history of Lloyd's, particularly in past centuries, has been closely connected with wars. Quite naturally so, because the marine risks were especially important at any time of international conflagration in which England—a naval power—was engaged. Today Lloyd's is one of those English institutions which are typical of the country and of London. Of course, it is a business for making money, but it is also a memorial to olden days, to tradition, so cherished in England, to correctness and exactness which result in honesty, and to pride.

During the German "Blitz," when so much of London's old city was destroyed, Lloyd's remained unscarred, though it was certainly an important target for Goering's Luftwaffe. Even though many a ship, insured at the Corporation was wrecked on the rocks of the seven seas, Lloyd's itself remains a rock, defying wars, "Blitzes" and even financial and economic crises which are a grim feature of Britain today.

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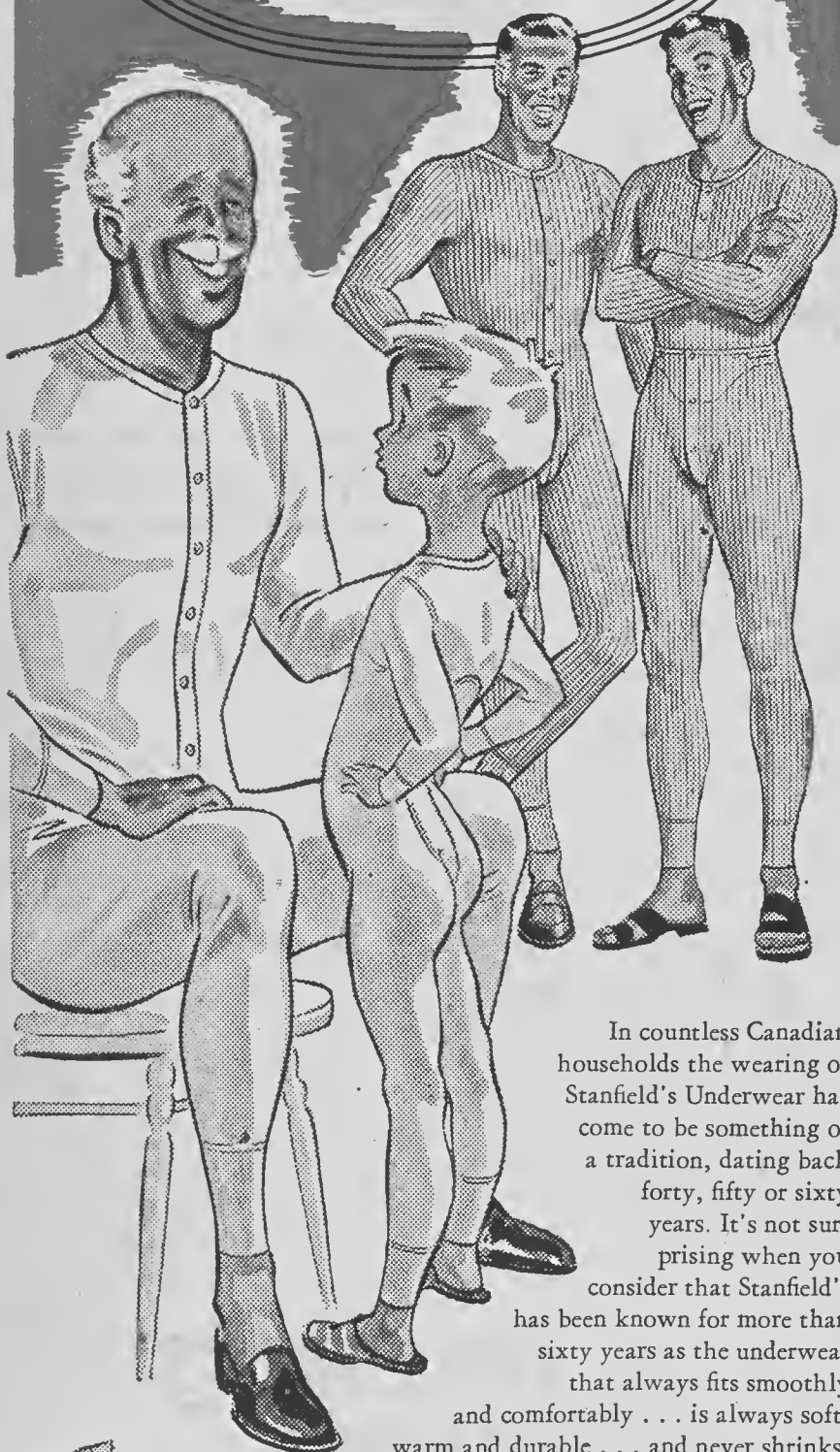
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How Short Grass Makes Beef

*Good pasture management and protein supplements
will increase daily gains of cattle on the range.*

by H. J. HARGRAVE

DURING the active growing season in the spring and early summer western Canada's short grass plains provide the kind of pasture that enables cattle to make daily gains up to three pounds per head—equal to those produced by the best balanced feed-lot rations. Investigations at the Dominion Range Experiment Station, Manyberries, Alberta, have established this along with other facts that are not readily apparent at first glance over the prairies. These experiments have indicated the nature of the response made by cattle of various ages and classes to grazing this short grass at different seasons of the year. Fundamental studies on the native vegetation have answered many of the questions that have been asked and have thus been instrumental in pointing the way towards improved ranch management practices.

In the early days of ranching in western Canada, it was commonly believed that cattle made their greatest gains in the fall of the year just prior to marketing time in late October or early November. Such is not the case. Maximum daily gains are made when the grass is green and still growing. The amount of protein, that im-

Seasonal gains of cattle correspond closely to the level of protein, minerals and vitamins in the grass. April, May and June are the months when the greatest gains are made. As soon as the grass matures and cures up in July the daily gains of cattle diminish accordingly. As a result the daily gains secured in August, September and October are only one-third as much as in the spring and early summer. For this reason it is not always advantageous to defer the marketing of grass cattle until the last thing in the fall. Often they are barely maintaining their weight in the late fall, and there is a risk of heavy shrinkage in the event of an early fall storm. Earlier marketings also help to conserve more grass for the balance of the herd. In view of the fact that 80 per cent of the season's gain is produced by late July or early August, it is apparent that there is a good case for earlier marketing of cattle. The fall months produce a rapid growth of hair in preparation for winter, but the actual gain in weight is generally small.

Fall rains that make green grass in September will result in increased daily gains in the fall. The high daily



Two-year-old heifers in November weighing in at 1,100 pounds. They are in prime condition and will winter well.

portant part of feed which is largely responsible for growth and development in livestock, largely determines the rate of gain. In the early growth stage the short grass averages 15 to 20 per cent protein which is greater than the usual percentage of protein found in the grains that are fed in feed-lot rations. The first growth of some grass species in early spring occasionally contains over 30 per cent protein, and as such is equal to concentrated protein supplements such as linseed oilcake. As the grass matures, sets seed and cures up there is a gradual decline in protein content. Cured grass contains only five per cent protein, less than one-third as much as in the active growing stage.

A similar situation exists in connection with the content of important minerals and vitamins. Green grass usually contains adequate quantities of phosphorus and Vitamin A. When cured, the same grass is deficient in these important feed requirements.

gains secured when cattle are grazed on cover crop in the late fall months are made possible by the high protein content of the immature cereals grown for this purpose.

Investigations over a long period of years have shown that two-year-old steers will make higher gains than any other class of cattle during the grazing season. Two-year-old steers will put on 375 pounds of gain in an average grazing season, April to October inclusive. Heifers of the same age can be expected to gain 350 pounds during the open grazing season. Yearling steers will average 325 pounds gain in the season as compared to 300 pounds for yearling heifers.

A number of factors influence the total gains an animal will make during the grazing season. The most important of these is the condition of the range. The above records were made on short grass range that was grazed at 40 acres per head for a seven-month period. This carrying

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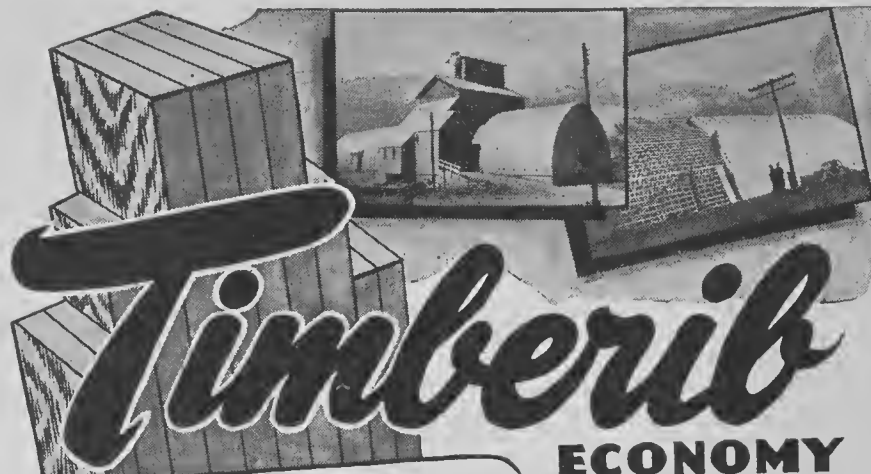
capacity was approximately correct for the type of range used, and the use of the range was such that there was usually a healthy amount of carry-over left at the end of the season. Had the cattle used in these tests been forced to live on only half as much grass per head, both the grass cover and the cattle would have suffered as a result. Maximum gains cannot be obtained from overgrazed range.

ANOTHER factor which has a pronounced influence on the summer gains of cattle is the condition in which they have been wintered. A steer that has been wintered in very poor condition will gain significantly more the following summer than will a steer that has been well wintered. Some steers wintered in an exceedingly poor condition registered a gain of 450 pounds in the grazing season, while similar steers wintered in a manner that enabled them to make fair gains in weight over winter were able to gain only 325 pounds under the same summer conditions. However, the steer that winters well will always make a greater combined winter-summer gain than the steer which is poorly wintered; hence, the former reaches a greater weight at an earlier age than the latter. When cattle are worth as much money as they now are, it generally pays to winter them reasonably well even if it means purchasing extra feed. This policy results in heavier market cattle and also avoids a lot of risk that is always present when stock are wintered so they are barely alive in the spring.

During the late summer and fall months the two major deficiencies in the native short grass are protein and phosphorus. If these deficiencies did not exist, it would be logical to assume that a two-year-old steer could gain well over 500 pounds in an average grazing season. It is equally logical to assume that supplemental feeds containing extra protein and extra phosphorus would improve gains during the latter part of the season. This has been done at Manyberries and results have been encouraging.

Linseed oilcake (37 per cent protein) and dried brewer's grains (20 per cent protein) have been compared as protein supplements for feeding on grass. These feeds have been fed for 100 days from mid-July until late October at the rate of 2½ pounds per head per day. Daily gains on yearling steers have been maintained at two pounds per head per day as a result while similar steers on the same kind of grass without any supplement gained little more than one pound per head per day. The phosphorus deficiency was provided for by giving the cattle free access to a mixture of bone-meal and salt. The above protein supplements gave similar results from the standpoint of daily gains in preliminary trials.

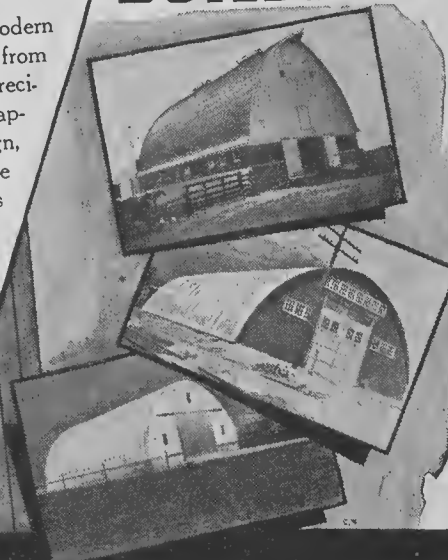
This supplemental feeding resulted in yearling steers that were out of the feeder class and ready to kill. They weighed 75 pounds more than steers on grass alone and sold for more money per pound. The investment in supplemental feed showed a substantial profit over feed costs and produced more pounds of beef per acre of grass.



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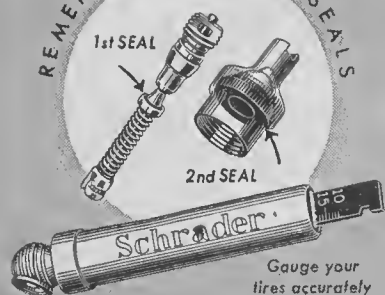
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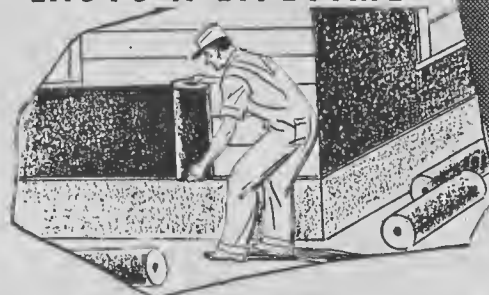
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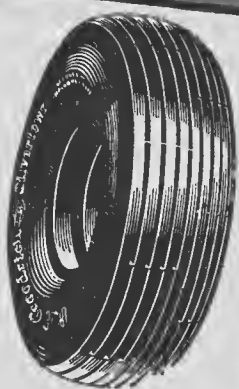
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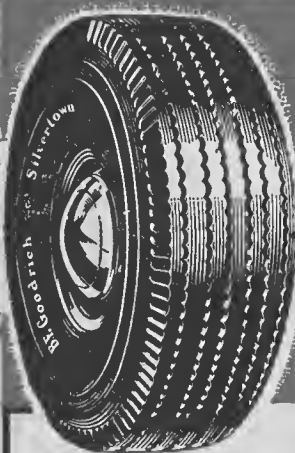


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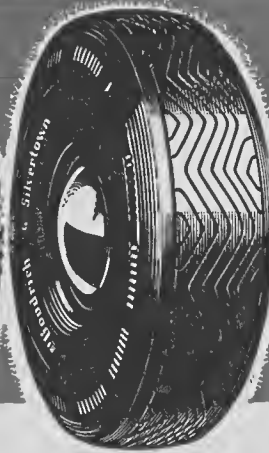
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Raising A Lamb

We discovered we were killing them with kindness.

by J. G. GALLINKAMP

I LIKE my lambs to come on the green grass. That makes them a little late, of course, but I figure that what you lose on the roundabouts you make up on the swings. This spring it didn't work out that way. For nature went on the rampage and gave us the back of the hand. Instead of the new-born lambs gamboling about in green pastures many of them were born in a shed during sub-zero weather. This was a situation that called for constant attention. And I must admit that getting up in the middle of a cold and frosty night and sitting at the bedside of an expectant mother isn't my idea of a good time. What with one thing and another, we lost quite a few lambs this year.

Twin lambs were the most difficult. Many of the ewes were willing to raise one lamb, but owing to the prevailing conditions they felt that two were just too much. We had our hands full, so I was glad when my married daughter, probably with visions of lamb chops at some future date, offered to raise the orphans. As she had been very successful with babies (one hundred per cent increase) I thought that she would be just the person to take over the job. From then on every time we found a neglected little fellow with life still in it we turned it over to her.

I don't think that she went quite to the length of wearing a white uniform or covering her face with a mask, but she did about everything else recommended by the maternity hospitals. She had a cot rigged up for them by her bedside, measured their milk out, and was right there at night time with a bottle of warm milk, every time they let out a weak little baa. Rumor has it that she even had a string of nappies hanging out to dry every morning. However, I wouldn't vouch for that. Some people's imaginations run away with them.

But for all the loving attention bestowed on them, the ungrateful little creatures insisted on dying. The careworn nurse was in despair. Her children were broken hearted as first

Percy passed away and then Josephine, to be followed by innumerable others. Her husband, with a man's unshakable faith in stimulants, tried to stem the tide of disaster by giving the patients a flying start in life with a good shot of rum, but still they died.

Towards the end of the lambing season spring made feeble efforts to assert itself and the crested wheat grass was once more green on my sheep pasture golf course. So I resumed my usual habit of playing a round of golf and looking after the sheep at the same time. One evening I found what I thought was a dead lamb. Evidently its mother was standing by. There was a little life in it, so I went through the usual performance that shepherds do, blowing into its mouth, etc., but it looked hopeless and its mother seemed to think so too, for she disappeared into the gathering gloom.

WHILE I was cogitating on the best way of disposing of the remains without too much work, it wriggled an ear. That almost made me mad. I was sure the lamb hadn't a chance. However, one doesn't like to knock them on the head, so I carried it home and put it into the warm brooder house for the night, betting myself a hundred to one against its being alive in the morning.

But it was. I found it staggering around scaring the daylights out of the chickens. I grabbed a beer bottle (someone must have left it there by mistake), filled it with warm milk, put a nipple on it, and let the lamb fill up, which it did, and asked for more. After that I fed it every three hours as much as it would drink, but not at night. That lamb flourished like the proverbial green bay tree, and now it follows me about trying to get nourishment from my legs at every opportunity.

From that experience we concluded that we were killing lambs by kindness, and pouring milk into them while they were too feeble to take it. From then on we lost no more.



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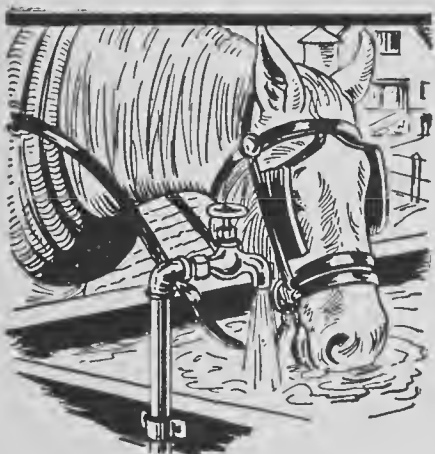
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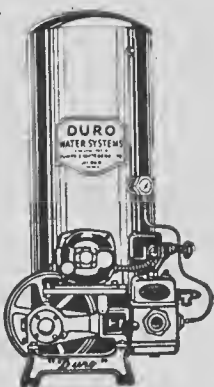
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Under The Peace Tower

Continued from page 5

On the other hand, John Diefenbaker has many friends all across Canada. The Liberals respect and fear him. The choice of the Liberal government would be Hon. George Drew; they can hardly wait to get at him in the Commons. Then there are some staunch Conservatives who argue that if you pull George Drew out of Ontario, the party will lose the province.

IT seems to me that a very good argument against Drew is based on the inexorable verdict of history, namely, that no provincial premier has ever been prime minister of Canada. For one reason or another, they seem to arrive in Ottawa with a provincial outlook, and this means not only territorially, but mentally. In other words, when the English people say "provincial" there is a certain connotation that the mind of said person can hardly go beyond parochial limits. There are plenty of instances of provincial premiers doing well at Ottawa, but none has ever reached the sublime heights. Witness the recent failure of the ex-Premier of Saskatchewan, Hon. James Gardiner.

There have been some great ex-provincial premiers here, namely Charles Stewart of Alberta, Charles Dunning of Saskatchewan, Angus L. Macdonald of Nova Scotia, Sir Lomer Gouin of Quebec. But in the cold analysis of "what it takes" no provincial premier has ever been deemed good enough to become prime minister. (Remember Bracken?)

So now the battle is on. Both Diefenbaker and Drew are personal friends, but this will not stop a ding dong battle. This is the great chance for both of them, and both have plenty of ambition, plenty of ability, and above all, plenty of oratorical skill. For some years now, the Conservatives have been handicapped in that they have not had a leader who could stand up and make a good speech. If they pick either Drew or Diefenbaker, it will keep the Liberals hustling to stay even.

For what it is worth, this writer thinks that Diefenbaker would be a far better man at Ottawa than Drew. The fact that Drew is the Liberals' choice puts the Kiss of Death on him, for my money. The Liberals have been pounding at Diefenbaker for eight years, and the net result is that after eight years, the Liberals are more afraid of Diefenbaker than ever. Meanwhile, Drew has had such opposition as a few broken down politicians could offer him in the Ontario House for a scant six weeks or so each year. Diefenbaker would be feared and respected by the Liberals, Drew would be a sitting duck, the Grits say.



"And don't follow me home, see?"

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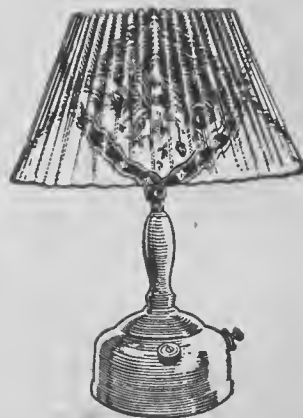
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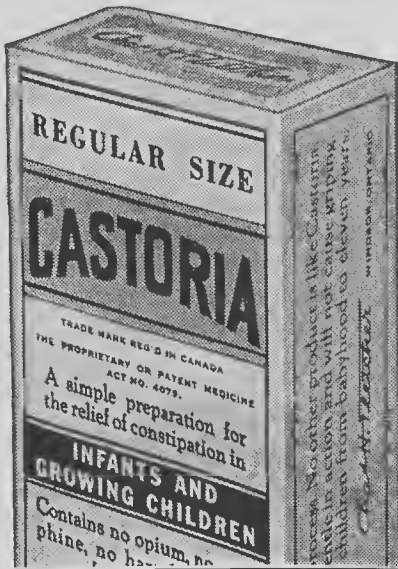
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Man Of Song

Continued from page 12

reservation where they'd be forced to stay put. These mountains have been their home country since too long to remember. All the Forest Service trails here are Indian huntin' trails, an' most o' the rivers and mountains has Niche names. Look'at that Indian cemetery I showed you folks yesterday. D'you know why it's located on a high hill, facin' west, and over-looking water? Because the old-time redskin believed that his last rest-place had to be high up where the Four Winds could blow away the evil spirits, an' it had to face west because the spirit goes to the Land o' the Settin' Sun, and there has to be water because the Spirit Guide who comes for the soul o' the departed brave has to travel in a Ghost Canoe. So there you are: All the old-time traditions hung onto, despite the fact that they're all devout Christians now and name their kids after Bible folk, such as Abraham Wildman an' Joshua Manyguns an' Peter Paul Foxclaws. Maybe they do wear old overalls now an' then instead of buckskin pants an' a smoky shirt, but they all got their hair in braids and they keep their blood clean an' won't marry into reserve Indians an' such. This is a proud tribe, Mister, and they're still ab-or-ig-i-nal, inside.

Eh? Don Marrigan?

SURE this is about him. I'm just tellin' you 'bout the Indians so's you'll understand what he didn't. Young Don, now, he was plumb fascinated by 'them. Like I say, they're

and it's kinda musical when you hear it comin' pulsin' through a mountain valley in the mists o' mornin'.

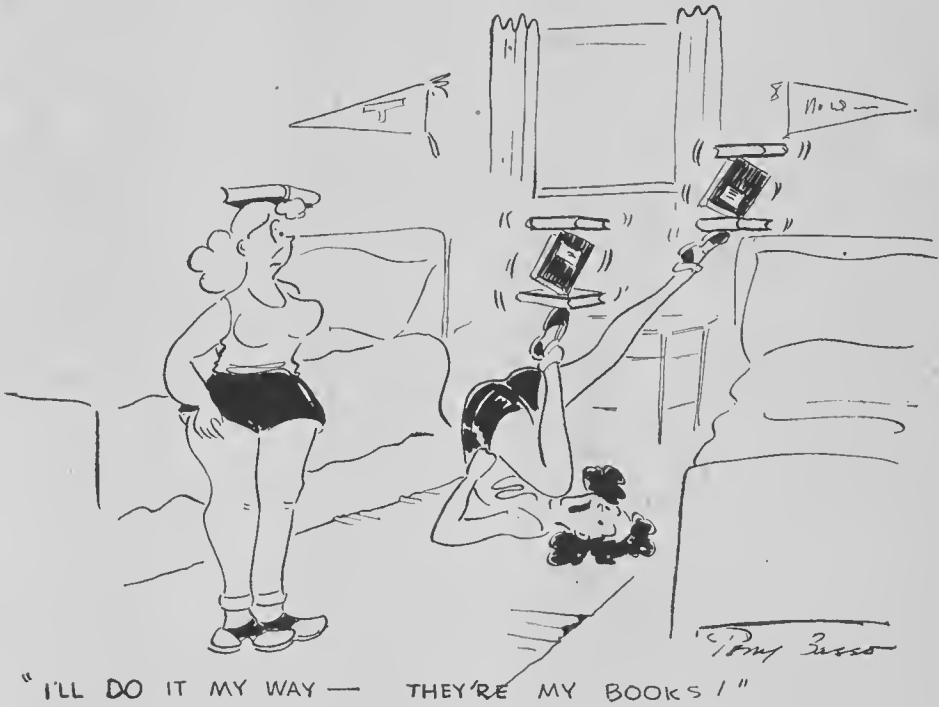
Oh, sure! You'll hear 'em yourself when we go on the trip. It's nothin' unusual at all.

Huh? The ministers object? Now look here, Mister; church folk don't need to worry none about Charley Red Bear's gang o' Niches. They may do things a little old-fashioned, but they're a good, clean bunch o' God-lovin' men an' wimmin. Least ways, they were until young Don Marrigan got to workin' with 'em.

Oh, yes. About Don. He was clean daft about these Indians. Every time we took a party back into the Smokies an' he had a chance to deal first hand with 'em, he was johnny-on-the-spot. They appealed to him, see? Maybe that gypsy streak in him, or somethin'. Anytime we ran into Indians, Don was right there in the front rank.

We saw a lot of 'em, too. Old Charley Red Bear is the chief of the band, and Charley an' me are good friends. I was there that day forty-odd years back when Charley was initiated into manhood at maybe the last real Sundance held in these parts. They skewered thongs into the chest muscles o' young Charles and he danced for eighteen hours around the Sundance Pole a-fore the flesh parted an' he finished the ordeal an' become a full-fledged brave. Sure! I know Charley well, an' you'll not find a finer man no-where. One o' the old-timers, Charley Red Bear, and that's why we knew what was up when young Marrigan went blunderin' with the old customs.

Wait, now! I know what you're gon-



still wild, so naturally they use the tom-tom when they want to pow-wow a little. Nothin' illegal, Mister—we got a Mountie only 40 miles away from here an' them police boys don't stand for no taboo shin-digs. No-sir! But if one o' these Niches wants to do a bit of prayin', say, he gets out his drum an' goes to some favorite spot on a hilltop and he thumps on his drum a little to get in the mood. He'll maybe take a line outta the Bible and start chantin' it in time to his drumming. Like this:

"Forgive our sin! Aiee! Aiee! 'Forgive our sins!' Ump-tiddy, ump-tiddy, ump-tiddy!

See what I mean? Singin' it up and down the Indian way, all in time to the tom-tom. It's their way o' praying,

na say. Is this a story about Indians, or about Na-pay-oo Ne-kun-oh.

Na-pay-oo Ne-kun-oh?

That's Indian. It means Man of Song. That's what the Niches called Don Marrigan.

BECAUSE he was sing-crazy, Don was. Ridin' herd on the ladies out in front o' the pack train when we were on a trip, Don would be singin' away like a linty. Kinda pleasant, too, hearin' his voice come boomin' down the mountain side, swellin' and rollin' in the echoes of the valley. Or at night, when we sat our blankets around the campfire and Slim got savin' away tuneful on his fiddle, young Marrigan would fair carry you away with the plain beauty o' song.

You could lay back and hear the night noises blend in, the breeze in the pine tops, a distant coyote on a hill, and the low rumble of the snow-slides up among the high passes. All of them makin' a chorus behind Don Marrigan's grand young voice.

The dudes ate it up.

"Do sing us a love song, Don!" the ladies would ask.

"Sing us a marching song," the old gents would order.

And the young ladies, they'd just sit quiet and sigh.

Huh?

No. The beautiful Miss Iola Van Roche wasn't one o' them. It was after Marrigan had left us that she came.

Oh, yes. Don left us. Like I say, he was crazy about the Indians. First honest-to-goodness Niche he'd seen that still clung to old-time ways. The tom-tom stuff got his mouth open, no less. They were just the little hand tom-toms, y'know, the personal drums used for prayin' and askin' for good weather and health and so on. Just to hear what Don would say, I got Chief Charley to fetch out the big tribal drum one time. That's the bull drum, you might say: the one they used in the old War Dance. It can be heard a matter o' miles when they start givin' it a real lickin'.

Marrigan sure was keen on that gadget. Wanted to buy it then an' there, but I got him shushed up before any harm was done. You don't go offering money to Chief Charley for such things. It's kinda sacred stuff, an' the decorated frame o' this big drum had belonged to Charley's father, old Og-hin-sha. Ever hear of him? He was the greatest chief in these parts, Og-hin-sha. A real he-man old guy.

I cooled off Don on his buying idea and next I know he's studying that drum careful and gettin' a workin' idea of how to make one. Which he did. Used an old spruce log hollowed out thin for the body, then took the hair off a green moose-hide and laced it on, top and bottom. All he had to do was leave it in the sun a couple hours or hold it over a fire's heat for a few minutes, an' she'd tighten up and boom out a deep throb when he hit her a wallop with the padded stick. Don got a great kick outta that drum. He used to take it off on a hill just like the Indians an' you'd hear him chantin' some mumbo-jumbo he'd made up, singin' it out loud and strong above the pulsin' thunder of his war drum.

What say?

Sure it was queer. I never said it wasn't, did I? Sure it was crazy stuff for a grown man. But I told you that Don Marrigan had a dreamy sorta face, an' you can't tell about folks like that.

NOR that ain't all. Don went and got hold of a complete foo-faw Indian outfit. Got some of it from Chief Charley's people, 'cause the squaws will sell moccasins and beaded shirts an' such the same as any Indians. But he couldn't buy a head-dress from 'em. The men had a few, all right, but they weren't for sale. Old Chief Charley has his father's war-bonnet. You know what? Chief Og-hin-sha's head-dress has no less than seventy-eight eagle plumes in it.

I forgot you wouldn't know what it means. Each feather represents some special deed. Like killin' an important enemy, for instance, or being an extra good fighter in some battle. Them

old-time Indians were fightin' fools, eighty-ninety years ago.

But about young Marrigan. He got himself a complete Indian outfit, feathered hat and all. Got the head-dress from some reserve Indians down in the settled country, and he looked a right handsome boy when all dressed up in beaded and colored and feathered Niche duds.

Sure I knew it was bad business not to keep him around. I'm not a fool, Mister! I knew he was a good drawin' card for my dude-ranch. Gave the folks somethin' to talk about back home, an' others came to see if they told the truth. Sure. Some of them came back, too, just on account of Don and his singin' and his foo-faw ways. I knew that. Besides, I liked his singin' myself. Even if he did quit singin' songs with words and went off on the hill out there and wore his Indian doo-dads and beat his drum and chanted just plain mumbo. It still listened good and sometimes it even gave you the shivers up and down the spine. Good music will do that, I'm told.

Don didn't stay long after he caught that Indian bug. He quit dude-ridin' for me and saddled his horse and took his drum and Niche clothes and moved back into the White Smokies, out among the Indians. Yes, he did! Chief Charley Red Bear brought me the news himself. Said that Don had moved into an abandoned log shack out on the edge o' the big river, spang in the middle of the Indians.

'Course, these Niches don't live all rammed together in a village, y'know. Each family is a couple or three miles apart, so's they've got a little breathin' space around 'em. It's arranged that way for another reason, too. They're scattered so they can be handy to their trappin' territories, an' so there will be game a-plenty near at hand to each family. Don wasn't exactly cheek by jowl alongside 'em, but he was plumb in the middle o' their wide-flung home territory.

NO, sir, they didn't need to leave him stay. Old Charley could'a kicked him out fast enough if he felt that way. Sure. But Don Marrigan wasn't doin' no harm right then. He told the chief that he wasn't gonna trap fur, which was what they were most worried about. All trappin' territory is divided up just so with strict boundaries, an' even if Charley and his band won't sign for treaty like I told you, the gov'ment is wise enough not to give any white folks trappin' rights in this region to avoid gettin' the Indians mad. So when Marrigan told the chief he wasn't gonna do any trappin' and that his main idea for bein' there was to learn somethin' about Indian songs an' drum music . . . Why, Chief Charley figgered it was all right. Like I say, Charley is my good friend and he knew Don had worked for me, so that kinda gave him a pass. Indians are like that if they know you good.

What say? How did young Don manage to live?

Shucks, plain livin' ain't no problem out in this country. There's fish and game a-plenty back here in the hills. All a man needs is a fry-pan, some sugar, flour, an' salt for bannock and such, with maybe a little tea for colorin' the drink water. Don had packed dry-grub to last him when he first moved in, and a spruce hen or a

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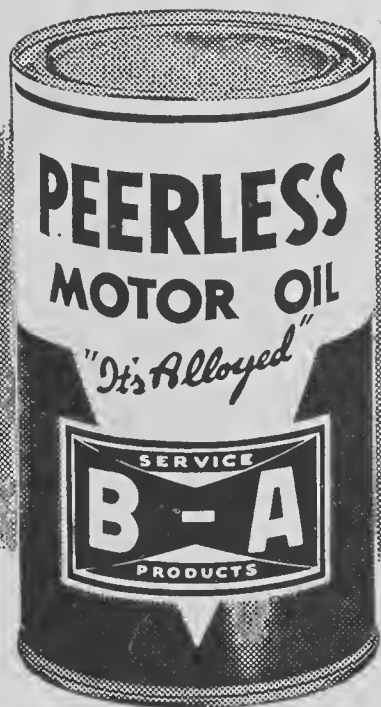
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trout or an occasional mule deer would supply the rest. Don Marrigan went back there in the Smokies an' started learnin' stuff about drums and Indian chants.

I know it sounds crazy on the face of it, but that's what he did. Maybe it was the gaudy colors about Indian toggery that caught his eye, for Don always did love foo-faw goods. Personally, I figger it was the drums that got him. You ain't never been to a real pow-wow doings, have you? Well, Mister, there's something strong 'bout drums. They get in the blood, the throb an' boom an' thunder of them. Get the heart to pulsin' in time, maybe. And Don Marrigan had been poundin' out good, strong music on that big war drum of his for some little spell before he took the plunge, and I reason that it had got under his hide. Yes—sir.

So away he went out among Charley Red Bear's Indians, and Charley himself taught him the drum beat for singin' prayers and the different drum time for dancin', and the tumpa-tumpa one that goes with Indian story tellin', and finally he even taught him the heady, blood-poundin' thunder they used in the old War Dances. More'n that, Chief Charley taught him some of the old chants. The chief told me that he kinda liked to hear young Don sing, so maybe that's why he took all the trouble about teachin'. Anyway, Charley taught him the chants like they use in telling the story about the Medicine Pipe of the Grizzly Bear. That's old Og-hin-sha's story again: he had a vision and got permission to make a grizzly pipe back in his young days. Chief Charley knew all the songs by heart and he tapped away on his hand tom-tom and sang 'em for Don Marrigan. Now and then Don would ask him to go slow so's he could write down the words and memorize the tune. Probably old Charley got a bit of pleasure out of showing off with them songs. I donno.

Oh, her! Miss Iola Van Roche didn't figger in this part. Not yet. Samson's saddle-bags, Mister! You're in an all-fired rush to drag in that green-eyed, red-headed hunk o' fem-i-nine beauty, ain't you?

Well, be patient. I'll get to her in a minute. What I'm telling you now is that Don Marrigan spent all that summer a-learnin' drums and chants. Got good at 'em, too. Two-three times I took parties o' dudes past that way and we heard them. Sounded like darn fine music, Mister, comin' strong across the hills. I liked it first rate.

SO did the Indians themselves like it. Chief Charley told me that now and then a few families would get together at Marrigan's shack, just to listen to him sing and tap their feet a little in time to the drums. Don got improvin' on the chants, too; even Charley Red Bear admitted that Marrigan made them sound better. Of course, it was the meanin' of the chants that Old Charley thought so much of, but Don didn't know Indian and all he was concerned about was makin' them into good singin' songs. Which he did. He even began to give singin' lessons to some o' the young Indian bucks. Yes—sir! I don't mean teachin' them how to sing, exactly, but he'd line up a bunch and learn 'em the chant tune, then he'd drum

for 'em and time their chorus, jumping in now and then with a solo part for himself. And the Indians joined in with a will.

Chief Charley told me all this, kinda-pleased that the old time music was back in the mountains.

So the summer passed and it came fall, and this here Miss Iola Van Roche arrived at my dude-ranch one day. Well, Mister, she's an artist, and I bin told that artist people is sometimes peculiar. I do know that this Miss Iola Van Roche sure was a queer case and no foolin'.

You seen any of her pictures? I don't mean the pictures she paints: them's just animals, quite nice an' sensible. But have you seen any pictures of the girl herself, taken by a camera and printed in the papers? She's a humdinger, ain't she? Donno as I ever saw such a lookin' girl before. Fair took a man's breath out, the prettiness of her.

She come here to my dude ranch in the slack fall season when the tourists have gone and before the hunters come and she chartered me to take her back into the White Smokies, so's she could see some mountain sheep and goat and maybe elk for pictures. She certainly could paint. That horse head up there on the wall—that's a sketch she made of Roany, my saddle pony. Good, huh?

WELL, Mister, you never saw such a girl as this Miss Iola Van Roche for wearin' clothes. She had the gol-darnedest notions about what was fit an' proper to wear out in the mountains that you ever lamped eyes on. I mean, I've seen ladies in britches an' articles called jawd-purrs that fitted neat or maybe too tight or maybe too loose, and I've seen wimmin—fully adult ladies—wearin' these here things



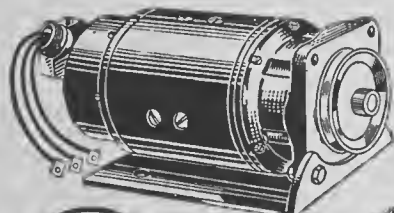
"Let's get a pound of the old-fashioned kind."

they call shorts, and I've even seen a stern lady-judge female decked out in great big vol-um-in-us bloomers, but I never saw nothin' till I saw Miss Iola Van Roche! We took along one pack horse extra just to carry her clothes. She had every kind o' garment you cared to mention.

Mister, in case you didn't know, that Miss Iola Van Roche is man-crazy. There's no other name for it.

Now me, I'm an old geezer pushin' past sixty, but she even made eyes my way. Fair set my scalp a-crawlin', it did. She's awful pretty, y'know. When I withdrew into my per-fesh-on-al

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aloofness as guide and chap-er-own of this dude trip, she turned them luscious long lashes on poor Slim Bates, who's married to two hundred and forty-six pounds o' stalwart woman-hood along with six kids. And when Slim blushed himself back out among the bull-flies and dust at the end o' the pack-train, she up an' said soft words to Legs Eddy, our cook. He's just a boy, is Legs, and he caught himself a broke-heart over her all the time she was here. 'Cause he knew his place, see—which was more'n you could honestly say for Miss Iola Van Roche.

WELL, I guided her out into the Smokies and we made a two-hundred-mile circle trip, her a-drawin' pictures whenever possible an' wearin' scandalous clothes. And when the circle was closin' in and only three nights out on the way back, we were sittin' at the campfire doin' a little harmless yarnin' when all of a sudden a tom-tom came thumpin' out o' the dark of night.

"It's just an Indian sayin' his prayers," I told her.

It listened that way. It was a little hand tom-tom, y' understand. Just one. And it was going ump-tiddy, ump-tiddy, ump-tiddy, just like they do for prayers. A body couldn't tell how far off it was, but I guessed a mile. It was one o' them clear, still nights of autumn when even the snow-slides quit rumblin' and all the mountains are quiet and big.

Ump-tiddy, ump-tiddy, went the drum, over and over.

"Listen hard," I told Miss Iola Van Roche. "Listen hard an' maybe you'll hear the Niche start chantin' his good-night song."

So we all sat quiet in the campfire light there, listenin'. But instead of a wailin' chant like I expected, another drum joined in. Ump-ump-tiddy, ump-ump-tiddy, ump-ump-tiddy—like that. Kinda unusual, it was, 'cause it upset the rhythm o' the first drum and Indians don't do things that way as a rule.

But it was still pleasant sounding, so we just sat there relaxed by the fire an' stopped talkin' and listened to that drum music. It went on for maybe a minute or two steady, then darned if another tom-tom didn't bust right in on the off-beat and change the whole set-up again.

"Is he still praying?" asked Miss Iola Van Roche.

But I didn't tell her nothin'. One by one you could hear the tom-toms join in. Little hand drums they were, but you could hear the swell in sound as each chimed in. And they joined in regardless of drum-beat, makin' a kind of rolling patter of sound that had no measure at all and kinda grated on the nerves.

Slim Bates looked across the fire at me, frowning.

"How many?" he asks.

"I'd say twenty, maybe more."

Slim nodded. He's a man who was raised here too, like me, and he didn't understand it any more than I did.

While we was a-wondering, the drums began to taper off again. You could catch the change in sound easy. First one would fade off, and after a full minute another would drop out. Took 'em a spell of time, but finally they were back to just one drum, going ump-tiddy, ump-tiddy, ump-tiddy all by itself.

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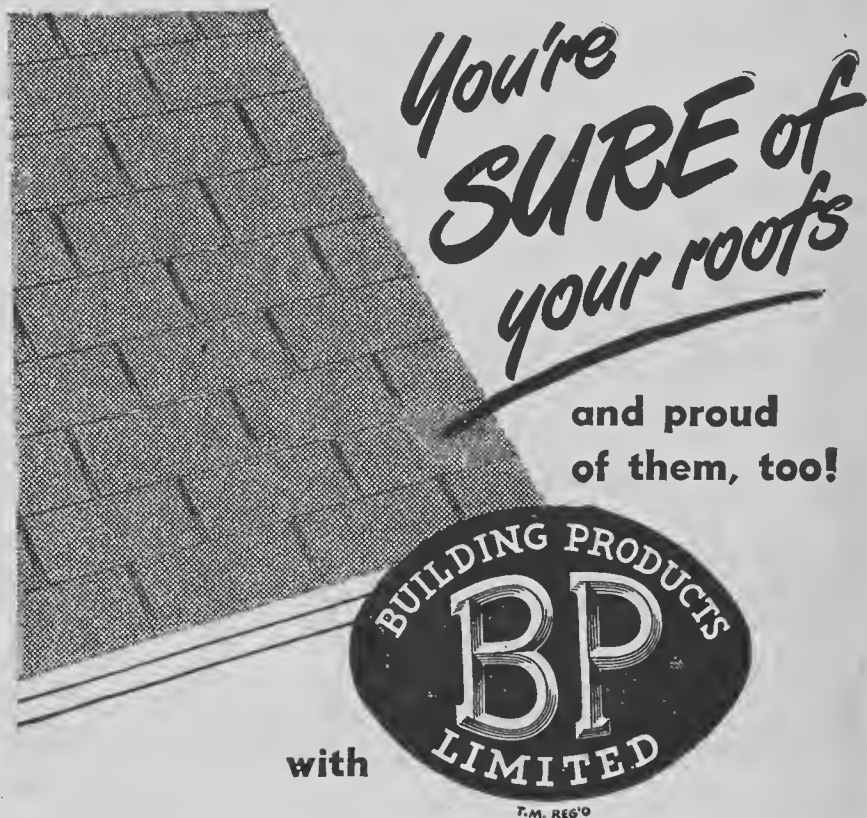
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When it stopped, it seemed like the night was extra quiet.

BUT it wasn't quiet long. Just long enough to make you raise your head and listen extra close, then a single drum started in again. This time it was deeper, stronger; a new kind of throb entirely. It went bomba-bomba-bomba.

"That's a dance drum," I said.

"Yeh," nodded Slim, still frowning in puzzlement.

A second drum joined in, then another and a fourth. All dance drums. They're the medium-sized tom-toms, played with a stick. They made noise, too—real noise! You could feel the pound of them come surgin' across the night, hittin' at you hard.

Just like the first time, they swelled up strong and stronger, then they began to taper off slow, each one fallin' out gradual. Until just one drum was left, going bomba-bomba-bomba. And it stopped.

Well, Mister; I could feel my muscles brace for the shock. I guess I sensed what was comin'. The great, thunderin' throb of a war-drum. Boom! Boom! Boom!

"Sa-a-ay!" exclaimed Miss Iola Van Roche. Drums work on the blood, like I say, and they'd got her keyed up already.

Slim spoke: "Boss, this drum band is all crazy accordin' to what I'm used to, but they're buildin' up to some-thing. Will I kill the fire?"

He made to kick sand over the flames. I would'a let him too, though it's been a long time since I doused my fire on account o' Indians. But just then we heard a new sound. The pound o' horse-hooves. And next second Chief Charley came gallopin' outta the pines heading our way fast. He flung himself off his pony reckless and I didn't need to look twice at old Charley to know that he's scared through and through.

"Bad trouble," he said right off. "Come!"

A lucky thing our horses were hobbled that night. We lost no time slingin' the leather and in half a minute three were saddled and ready.

"You stay here by the fire, Ma'am," I said to Miss Iola Van Roche, but Chief Charley shook his head quick.

"She come too," he said. "It is best to be all together."

So young Legs threw a saddle on her nag, and while he was doing it Slim Bates slipped into our teepee tent and brought out the big-game rifle we always carry in case of emergency. He slid the .303 into his saddle-scabbard. Chief Charley saw that play but he didn't say a word, and I kinda gathered that he even approved. Then the dude-horse was ready and Miss Iola Van Roche climbed on. She was all decked out in high-heeled pumps and was muffled up to the ears in a black furry business like a Russian duchess might wear in a December blizzard.

CHARLEY led the way. All this time the drum-music was pounding out loud and strong. Boom! Boom! Boom! A deep, full-bellied kind of throb, comin' from three-four of the big bull drums. They had the very air rockin' with their thunder. We rode on the gallop straight into that wave of sound and we could feel the vibrations go through us, every beat. I don't mind admittin' that I was kinda scared myself right then, chargin' blind along

a pitch black trail with that wild drum-throb getting louder every minute.

Just as we reached the river the big drums faded out and we heard the dance drums and the tom-toms again, and when we were out in mid-stream with the black, roily current swirling around the saddle-girths the chant started. I'm tellin' you, it sounded eery. Maybe it was being out in the middle o' the big river with the ford in flood. Maybe it was the dark. Maybe it was coming after that throb o' war-drums. I donno. But it sounded eery.

Up and down it wavered, the Indian way. Over and over, with the tom-toms thumping in the background. Maybe thirty-forty voices, all chanting in the high, shrill Indian way. You know what? It sounded hungry.

Yeah, I said hungry. Sounded kind of old, if you understand me. Kind of old and strange and hungry. Oh, no; not food-hunger. A different kind of hunger, Mister. Much different.

But it faded away again as we splashed out the far side o' the river and set our horses to climb the bank. It faded away gradual, and as the chant faded a big war drum joined in. In a minute the singing was all over and there was just the big drum going Boom! Boom! Boom! with the little tom-toms making a patter in behind. You'll think I'm crazy to say it, but a kind of hush seemed to settle on the night all of a sudden, though them



"You beast! You promised me this would be fun!"

drums didn't lose a note. All the same, a tight sort o' tension seemed to hush the night, and out of that drum-filled silence a great, rich voice swelled loud and strong and filled the whole mountain valley with music.

"Na-pay-oo Nee-kun-oh," muttered Chief Charley Red Bear. "The Man of Song!"

Miss Iola Van Roche spurred her horse alongside mine and I could see her green eyes shinin' in the dark.

"Who is it?"

"Feller name of Don Marrigan," I told her. "He used to work for me till he went off to live with the Indians. He's something of a singer."

And Miss Iola Van Roche, her what's an artist, said:

"You're telling me!"

THERE was a red glow in the night ahead, so Chief Charley halted us and we tied our horses to stout spruces. I felt my Roany tremble as I tied him. Don Marrigan had quit singing after that one bust and now all the drums were going full tilt. I mean all the

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drums, the tom-toms, the dance drums, and the big war-drums too.

"Come!" said Charley. Maybe he shouted it. I donno. All you could hear was drums.

So we scrambled along in the dark behind the old chief and finally we climbed up on a ridge where some o' these scrub limber-pines were growing. We pushed through the first fringe and stood sheltered amongst the pine and looked. It was all spread out below us, and it was really somethin' to look at!

There was a natural kind of hall there hollowed in the rocks. A great fire of quiet-burnin' willow was flaming in the centre, lighting up the whole place in a blood-red way full o' movement. It glowed on the naked bodies of two lines of braves, standing down the sides of the hall on either side o' the fire. Oh, they had on breach-clouts and beads an' maybe headbands, but they looked naked to me, 'cause I'm talkin' about their faces. Each one was poundin' a hand-drum. At the far end ten or twelve braves were squatted on the ground in a half circle with the dance drums, and they were lickin' them hard. Behind them again, four strappin' built Indians were standin' up behind the great war-drums, a padded stick in each hand and beating out the rhythm o' the boom.

Nor that ain't all. Don Marrigan was there. He was standing up on a great flat rock behind the war-drummers. He had on his feathered head-gear and all his fancy Indian foo-faws. He looked a handsome piece, as always, but the sight of him right then sent shivers through me. Because in one hand he had a long, gleamin' knife, in the other waved a tomahawk! I'm telling you facts. He was kinda swayin' in time to the drums, and even across the firelight you could see the wildness on his face. The drums had got him.

At his signal the braves started chanting, and the wail of it swelled up out of that valley and hit you in the pit o' the stomach. It sounded like we were back two-three hundred years in time. It was the old, pagan Indian.

SOON the chant faded off and the tom-toms quit and the dance drums stopped and all but one o' the war-drums dropped out, and the one that kept going had a hand pressed tight on the skin so that the beat was muffled, but it still sent a jump o' blood through the veins every time it thudded. And Don Marrigan stopped his struttin' and he stretched out his arms and showed off his knife and fancy tomahawk and he opened up his mouth and he sang.

Chief Charley gave a little groan.

"What is it?" I asked.

"The War Song of Og-hin-sha!"

Well, say! We could see those braves drink it in. We could see them strain to listen. And we could see what they were feeling, all across their faces. They weren't Silas Marten and Tommy Pinetree and Moses Eagletail any more. They were Indians I didn't know at all. Savage Indians.

Don Marrigan, he'd sing a line or two, then the drummer would take his hand off the skin and thump out the full thunder, good and strong. At every pause in Don's singing the braves would scream out their chant. Then they'd dance. Nor it wasn't show dancing, like we know. It was act-dancing. With knives. With tomahawks. Then



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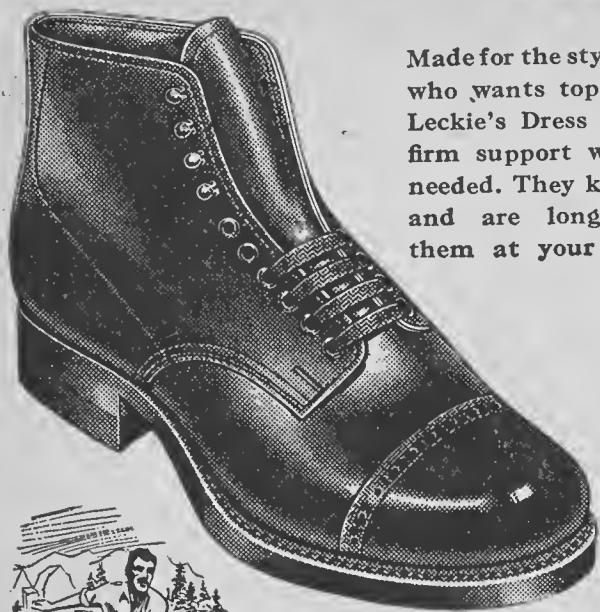
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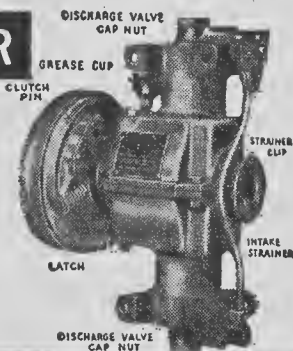


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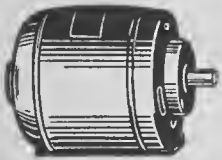


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Don Marrigan would raise his hand and the dance would stop and the chant would die out and the big drum would go muffled. And Don would sing again.

"What does it mean?" young Legs Eddy asked, kinda shivering.

Shucks, a man didn't need to know what the words meant. The sounds told you that. It was the old-time War Dance stuff.

Chief Charley said:

"The Man of Song has been working with my braves, teaching them this. All through the Berry Moon—August. All through the Goose Moon—September. They made a secret of it to surprise the rest. On the first night of the Mad Moon, tonight, the secret was to be shared with us all. But my braves changed that. They did not want the women and the old men to watch. They wanted this all for themselves. Like it is now."

Don ended his line o' singing and the scream of the chant came again and the thunder of the big drums, so Chief Charley stopped talking. But you didn't need to have explanations right then. They were stamped plain on the faces of the young bucks, prancin' around and showing off their axes and knives.

When the quiet came for Marrigan's song again, Chief Charley went on:

"I taught him the songs myself. He sings the words, but he does not know what they mean. My men know. They are young men; they have hot blood. That song is the War Song of Og-hinsha, my father. He sang it when he was first made a chief. He had come back from battle. He sang about the white people who were the enemy he had fought. He sang about the scalps he captured. Look!"

MARRIGAN'S line was finished and the braves raised their screams once more. This time they acted the scalping in their dance. They acted it real. Their faces were horrible in the dancin' light of the red fire.

Don Marrigan raised his arm again, but for a minute the Indians didn't quiet down. The madness was working on them. The blood lust was gettin' real.

When things quietened out a little, Chief Charley told us the rest.

"The old days are gone; the Indians cannot win any more battles. This War Song was made when my father was young. But the Man of Song has put a spell on the young men with his mighty singing, with his drums. I found out only tonight. It may be too late. See!"

The drums roared out again and the shrieks of the braves stabbed up at the night. They were dancing wild, and two braves started to show off. They pretended to fight each other. They had axes in their hands—tomahawk axes, and they slogged at each other to show off. Maybe it was pretending, but you could see their muscles ripple in the fire-light, you could hear the clash of the axes. The rest watched with wild eyes and shouted them on.

Marrigan had to get off his platform and go to the drummers. He had to grab their arms to halt their pounding. So the drums slacked off then, all but the muffled solo war-drum. The two fighters stood back from each other and you could see them pant, and they eyed each other with tense eyes, half angry. It had come pretty close to the edge. But Don Marrigan didn't know.

He climbed back on his platform and he strutted his knife and war-axe before singing his line.

"Take him away!" Chief Charley said to me, urgently. "Take him away before he drives my young men to murder!"

What could I do? I stood there behind that screen of pine branches, helpless as a kid. Slim Bates fingered his rifle and shook his head. Young Eddy was scared green.

BUT the girl, Miss Iola Van Roche, she gave out a little gurglin' sort of laugh. She knew what was going on, all right; don't fool yourself that she didn't. But she gave out that excited little laugh, like I say.

"Tell me something," she spoke. "Is that Marrigan fellow a white man?"

"He is," I answered.

"Okay," said Miss Iola Van Roche. "I'll stop this jam session for you, right now!"

With that, she slipped through the screen of pines and stepped down the slope into that fire-lit hollow. Marrigan had just finished singing his line. I donno what it was all about, but it sure looked like Miss Iola Van Roche had picked on the wrong minute to show herself. Them braves let out a howl that near scared my hair off. They threw their tom-toms away and they up with their axes and they started towards her on the gallop. Miss Iola Van Roche stood there all dressed up in black furs, muffled to the edge of her red hair. She made a picture, she did, but I remember most them wild lookin' Indian bucks with their axes high as they charged at her.

I heard Slim Bates pump the lever of his carbine, sneekin' a live cartridge into the breech. And I heard Chief Charley give a little moan and start to step into the light to do what he could.

But just then Miss Iola Van Roche did something herself. She sudden-like threw off that black cape thing. She did, too. And there she stood, all lined out 'in the fire light in a fluffy white gee-gaw so thin you could see clean through it! Mister, I ain't foolin'! Them Indians, they stopped still. They stood there and they gaped. Nor you couldn't blame 'em, either. No—sir! So Miss Iola Van Roche stepped right through that line o' gawpin' Nitches and she walked up to young Don Marrigan, who was starin' worse'n any. Miss Iola Van Roche gave out a little gurgle laugh again and said:

"You come with me."

And Don did.

YEP. We hustled Marrigan outta the White Smokies without no delay, and we got orders from Chief Charley Red Bear never to let him get loose in the mountains again. Miss Iola Van Roche took that dazed young feller back to Noo York, and next thing we know he's singin' in this op'ra thing. But it was a pretty poor show compared to the singin' Don Marrigan did back in the Smokies that first night o' the Mad Moon.

Yeah!

Maybe he'll get on, though. Maybe he'll bust loose and show them music-likin' folks some singing as is singing. That is, he will if Miss Iola Van Roche lets him, 'cause she's got him all wrapped up to do what she says.

Eh?

Oh, sure. The papers still call her Miss Iola Van Roche, on account of her being an artist-lady, but she's really Missus Marrigan.

The Insignificant Earthworm

It eats its weight of food daily and transforms vegetable matter into humus



MAN and all other forms of life are tied by indivisible but vital bonds to the thin layer of soil on the surface of the earth. Above this surface live perhaps millions of forms of life, including man, who would die but for this living strip of soil. Below the surface and within the soil are other myriads of living forms which are largely responsible for the perpetuation of life above the surface.

It is a rather startling fact that while much nutriment for plants and animals is derived from mineral matters dissolved from soil particles that have been formed from the weathering of rock, the real balance between life and the extinction of life is held by that small proportion of soil material which we call humus, the product of decaying plants and animal material from which the life has fled. It is this humus which helps the soil to store moisture, and which contains so richly the plant food from which come those nutritious grasses, useful grains and other plants, on which all life above the surface depends.

For the making of humus, nature makes use of many processes, including slow combustion, chemical disintegration, bacterial decomposition, fermentation, heat, light, darkness, wind, rain, frost—and earthworms. Of these many processes that which is the quickest acting is the one for which earthworms are responsible. These lowly creatures, which live for the most part in the top 18 inches of the soil, are constantly burrowing and tunnelling and eating as they go day and night, all kinds of dead organic material. They may go at times as deep as 10 to 14 feet, quite frequently to a depth of five or six feet, always leaving behind them their castings—highly nutritious humus.

We are told that during the winter months, in colder climates, the larger rainworm burrows below the frost line and lies dormant while the ground is frozen, though it has been observed in slushy snow and remains active in fairly low temperature.

THE earthworm population of an acre of soil may vary from some thousands to millions, and while there are various kinds, ranging in size from extremely small to extremely large worms as long as 11 feet (found in certain parts of South America, Africa, Ceylon and Australia) there are two common kinds with which we can be concerned, namely the rainworm, which may attain a length of 12 inches or more, but is said to average about eight inches, and the brandling or manure worm, smaller, very active and prolific. This smaller worm ordinarily inhabits manure piles and compost heaps, but is said to adapt itself to the environment favored by the rainworm. The two worms are alike in that they feed voraciously on decaying vegetable matter, digesting and deodorizing it to humus containing a high percentage of water soluble plant nutrients. The manure

worm is said to have an average length of about four inches.

It has been calculated that earthworms in concentration of from 25,000 to 50,000 per acre would bring to the surface from 10 to 18 tons of dry earth each year, in very favorable locations. In England, it has been calculated that earthworms could produce an annual volume of castings averaging more than 200 tons per acre. Indeed, the extraordinary ability of earthworms to transform coarse, unusable soil material into rich humus, has led to the development of earthworm culture, and to the writing of several books on the subject. One of these, entitled "Harnessing the Earthworm," by Thomas J. Barrett (1947), states that an earthworm will take into its body its own weight in soil every 24 hours. Since they weigh about 500 to the pound or 31 per ounce, averaging four inches in length, a million worms would weigh approximately one ton and would pass through their bodies about one cubic yard of earth daily.

Therefore, because earthworms must be pictured in large numbers in relation to their soil enriching process, one of the functions of earthworm culture is to produce them in large numbers for distribution to soils where their work is needed. Some soils apparently contain earthworm populations of a million or more per acre.

EACH earthworm is both male and female, and will produce a lemon-shaped egg capsule (which may contain from two to 20 fertile eggs) every seven to 10 days. These eggs, under favorable conditions, hatch in from two or three weeks into tiny, whitish appearing worms about one-quarter of an inch long. They immediately begin to eat and in from 60 to 90 days have reached the reproductive age, though they may be a year old before reaching full mature size. Earthworms live for many years, and one report tells of a single worm under observation for a period of 15 years.

Colonies of earthworms are usually established from egg capsules which are placed in boxes about 14x18x6 inches, filled with suitable feeding material. Egg capsules are said to be valued commercially at about one cent each, and a box of the size indicated filled with about 500 breeding worms at about \$15.

The food of earthworms under culture is the same as under natural conditions, namely all kinds of vegetable material, manure, some soil, garbage and similar materials. Plenty of moisture is needed for the quickest increase. Large increases in yield of crops are claimed to have resulted from the introduction of earthworms in sufficient numbers, and there are apparently instances on record where farms of a hundred acres or more which have yielded consistently good crops year after year for a very long time, have had very special attention paid to the earthworm population of the soil.

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Rats

Continued from page 13

similar fixtures built in with the barn must be adequately rat proofed. They should be so constructed that there are no dead spaces under or behind them, thus providing hiding places for rats. The bins themselves should be completely covered or lined with metal and such constructions which already have hiding spaces for rats under or behind them should be completely sealed in the same manner.

HAYMOWS frequently present a grave problem to the heavily infested farm, but the farm owner will find that the haymow alone is rarely responsible for the rats. If all other rat harbors in the barn are effectively taken care of, the rats will quickly leave the haymow of their own accord. Walls having rough exteriors encourage rats to reach the second storey from the outside. This threat, however, is easily eliminated by tacking a strip of metal eight inches wide just below the joists supporting the upper floor.

Of all buildings on the farm, granaries and corncribs are probably in the greatest need of rat proofing. In remodelling or building such structures it is therefore important that they be rat proofed permanently. Here, as in other buildings, this is best accomplished by the use of concrete foundations and floors.

If this practice is not feasible, then these structures should be elevated above the ground to a height of at least two and one-half feet, and should have the walls and ceilings covered on the inside with hardware cloth or woven-wire mesh made with two or three meshes to the inch. The same should be done on the under side of wooden floors.

Keeping in mind that rats will not stay long where considerable air and light are allowed to enter, small granaries and even larger structures may be built on posts or piers. The supporting posts, however, must be covered with sheet metal, or else be protected at the top with metal collars extending nine inches or more out from the supports. This will discourage rats from trying to gnaw through the floors.

While not attractive in appearance, piers capped with wash tubs or dish pans will rat proof the building. If glazed sewer tiles are used for supports in place of wooden posts metal covering will not be necessary.

DUE to the amount of grain that is used in the feeding of poultry, such houses are usually a problem of rat control. Rat proofing poultry houses, however, is not so difficult when approached with the proper knowledge. As has already been pointed out, the removal of places where the rodents can secure safe harborage and an easy access to food is the first step in getting rid of the pests. Three things in particular are to be avoided in connection with poultry plants: Wooden floors built close to the ground; double walls; feed hoppers, nest boxes and other fixtures so placed that they may provide safe retreats for rats under or behind them.

In rat proofing the hen house, the foundation as well as the floors should be concrete. If this is not practicable, wooden floors should be elevated two or more feet above the ground to ensure a clear air space underneath. If warmth is a consideration, build two thicknesses of flooring with heavy building paper between.


Brooder and portable laying houses which are set close to the ground on runners quickly become rat harbors. Feed sifting through the cracks soon attracts the rodents and in a short time they establish themselves in burrows. Therefore, portable houses should be raised to give at least a two-foot clearance underneath. Hen nests should be two feet above the floor, grit and feed hoppers one foot. Other equipment including drinking vessels should be given the same consideration. If your poultry houses are well proofed and rats are still around, check nearby buildings, etc., for possible rat harbors.

For the destruction of rats on farms which have become infested, or where proofing is not possible, there is nothing quite so effective as poisoning. Trapping may be employed if used in conjunction with poisoning; but for trapping, great numbers of traps must be used, otherwise the rats which are not trapped at first will soon become trap wise. Dogs trained to work alone as rat-catchers will help keep the rat population in check. It is rarely that cats are of any value in this respect as few cats will tackle a full-grown rat full of fight.

IN the selection of poisons the great majority of them are to be avoided due to their deadliness to other forms of life. Red Squill is comparatively safe to use as it is relatively harmless to humans and livestock alike. It is obtainable in liquid or powder form. The dry form is preferable to the liquid as it is less expensive, keeps better, and is more readily mixed with a variety of baits, such as fruits and vegetables, canned dog food, sweet potatoes, bananas and fresh bread. Dry bread may be used if it has been made into a soft mush. Never use moldy bread. Sweet milk, fish, meat and peanut butter also make good baits. There is one disadvantage to using squill in that it gives off an odor, which rats easily detect, and those unharmed with the first dose are not likely to be induced to touch it again.

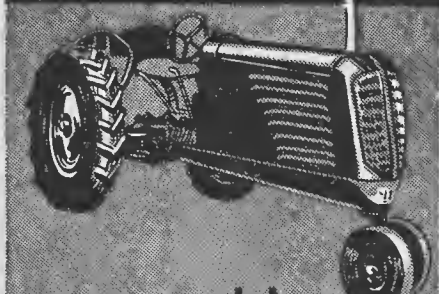
A recent type of poison which already has proven successful in exterminating rats is known as alpha-naphthyl thiourea. In short form this word is antu. Antu works on rats in a very deadly and peculiar manner, causing the animals to be "drowned" by their own body fluids. It is comparatively safe to humans. It is not dangerous to dogs, cats, poultry and hogs if the proper care is used in preparing and placing it. It is tasteless; hence, rats cannot detect it in baits. It may be mixed with another dry ingredient and dusted where the animals are accustomed to travelling, thus they get a lethal dose of antu by licking their feet.

Antu may also be dusted on water where rats are accustomed to going. Extreme caution, however, must be used to prevent other forms of life from getting it. The use of pans of water placed under floors where rats live is reasonably safe. With antu it is possible to combine it with a suitable base in proportions which make it toxic enough for rats, and yet less dangerous to livestock. Straight antu is not available to the general public,



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but may be bought in several commercial rat-killing preparations which are on the open market.

In the mixing of any poison, it must be remembered that rats are attracted to fresh baits more readily than to stale ones. Poison should be set out just after sunset, and what is not eaten during the night should be taken up and destroyed the next morning.

Rat proofing your farm means good buildings with good foundations, and the removal of all places which might provide rat harbors. Keep your farm clean and tidy and free from piles of trash, weed patches and places where rats can gain easy access to food, and the rat problem will be solved.

Planning For A Dugout

IN your article "Dugout Country" of a recent issue there were quite a few things left out. As it included a request for personal experiences, I will try and tell you what I learned about dugout construction.

The dugout should be located above the farm buildings so that no drainage from the yard can seep into the water. Then a dugout obviously cannot be built on a gravel vein. To make sure the subsoil holds water, one has to look for fox-tail, water-spruce, fire weed, etc. These plants have their roots far down in water-holding clay.

Later, when a dugout is filled with water, these plants become a pest. They send their shoots up to the surface, and there they swim. The wind blows white willow blooms in the water. They hook onto the green weeds and sway back and forth. It looks awful, like a cesspool.


I asked the experimental farm at Ottawa how to control these weeds. They advised spreading a poisonous chemical substance on the water. I did not do this. But after six or seven years the weeds stopped growing. I don't know why. It might have been too wet.

My dugout is on a creek. I have a river when the snow melts. It is wrong to let the water run in on one side and out the opposite. This silts up the whole dugout. The overflow must be about one-quarter of the full length from the upper end. In this way only the upper quarter to the overflow silts up. The water brings grass seeds. This grows excellently in the silt. My dugout is 12 feet deep and has been standing 15 years, but I have only about three inches of silt.

I dug a well beside the dugout seven feet deep and four feet square. It is cribbed with swamp-spruce. From the seven-foot level I dug a trench to the pond and filled about 16 inches square with fine river sand. About one-half inch of fine, clear water comes through this sand filter to the well. It is still standing solid, but I don't use it. The cribbing is not tight enough. Mice and bugs find a way in and get drowned. Then it tastes too much of spruce. I prefer the water from the open pond. A cribbing is needed that does not taint the taste of the water and fits so well that no mouse or bug can enter.

Our agriculturists could do the farmer a favor by telling him how to kill weeds in the pond without poisoning the water, and what kind of cribbing is best.—Grimshaw, Alta.

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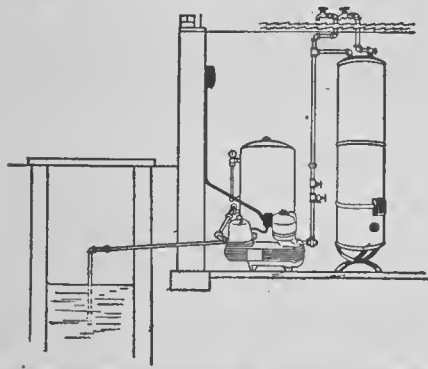
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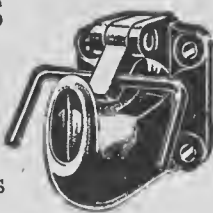
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Case Of The Maternal Gobbler

A proud and truculent sire takes over domestic duties.

by GILL SHARK

LAST year on my father-in-law's farm occurred a little domestic incident which was human enough to be worth recording.

The family keeps quite a large flock of Alberta Bronze turkeys and, last year, they bought a huge, handsome gobbler. The Bronze turkeys are a proud, majestic lot, anyway; they scorn sleeping indoors, even when it is 40 below outside; they never mingle with any of the barnyard fowl; and they love to show off. But Old Gobble (as the new gobbler was called) was a notable among them.

While he indulged in the usual strutting, he was a conscientious fellow and spent a lot of time pacing around his harem, making sure that the hens were feeding well and were unmolested. Dogs could scare everything else on the farm, but they left the turkeys alone, especially when Old Gobble was in sight.

Then, an unusual thing happened. Old Gobble got into a domestic problem. While most turkey hens are good mothers, one of his flock turned out to be a renegade. After sitting ten days on a big nest of eggs under a raised-up granary, she just got tired of female drudgery, stepped off the eggs and refused to return.

Old Gobble was a sight to behold. He walked back and forth before the granary, gobbling loudly, sometimes to himself, sometimes to the rest of the flock. He peered at the nest of eggs, his long legs and his fanny sticking ridiculously up in the air, and gobbled some more. He went down to where his faithless hen was feeding calmly with the other laying hens and gobbled excitedly for half an hour. It was no good. She was fed up. She wouldn't go back.

Old Gobble went back to the granary, crawled under it and spread his

body over the eggs. At first my in-laws thought he had borrowed the idea from the Pekin ducks, where the drake is a very obliging father, and was merely going to keep the eggs warm until the hen returned. Maybe that was Old Gobble's original idea.

The point is, the hen refused to become a mother. She wouldn't go near the nest.

Old Gobble took over. Day after day, night after night, he sat faithfully on those eggs, leaving them only for a drink of water. He was a fierce old fellow in his new capacity; anything or anybody approaching the nest was dealt with promptly and madly.

In due time, much to the amazement of visitors to the farm, the eggs hatched; and Old Gobble, proud as any mother, took his brood out into the world. Even yet, he put aside his masculine pride and scratched for them, broke tough little shells and seeds for them and (probably due to his size) reared them better than the hens themselves.

Old Gobble watched over them until the fall when, much like the other hens, he neglected them more and more each day until they were able to look after themselves. But when roosting time came each night, they ranged themselves alongside him on the roost—a position once occupied by the other hens.

This year, we have been watching anxiously to see what effect his maternal experiences had on Old Gobble. The shameless hen has started setting again and promises to be a normal, obedient mother. Old Gobble parades about the yard, keeping an eye on his wives and things in general. It is noticeable that he inspects the nests carefully each day. Otherwise he gives no sign of yearning for a mother turkey's role in life.

Seven Black Bears

The tale of three Saskatchewan hunters who were forced to adopt wholesale methods.

by G. H. HERBERT

ONE of the strangest experiences that ever befell three pioneer settlers of Saskatchewan happened to Carl Althouse, and Hugh and Claude Salmond. They were located in the northeast corner of that province, about 60 miles south and west of the Junction that branches the Canadian Northern Railway on to the Great Hudson Bay.

To make ends meet, and prove their right to existence, they were cutting cordwood, not very far from their homesteads. Carl Althouse and Hugh Salmond returned to their shack one evening, after a hard day's work, to find it had been ransacked, all their food apparently eaten, pots and dishes smashed, and the bed clothes and curtains torn into shreds. This happened in the fall of last year. Tracks around the shack evidenced that a bear or bears were the culprits.

Bright and early next morning, they started on the trail, over which a slight scruff of snow had fallen. The tracks showed that apparently Mr.

Bear was uneasy. That he had backtracked two or three times, never stepping out of his original footprints . . . and that he had taken occasional tremendous leaps to the cover of huge trees where the ground was bare, thus making the trail very difficult to follow.

About noon they located a den, such as it was—a huge hole scooped out of the side of a beaver dam, and the appearance of the ground around the den, it being in a much trampled condition, evidenced that there was more than one bear.

They had seen some unusual movements in the branches of a large, black poplar tree, located some distance off the trail, along which they had come, so Hugh backtracked, while Carl started to circle the tree. Almost immediately, Carl heard Hugh shoot, and also yell for help. He rushed towards the sound, and came on a scene which beggared description. . . . It could be described as a "BEAR TREE." Imagine, if you can,

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a huge, black poplar tree, with black bears as foliage . . . Five huge, black bears, some clambering up, and the others making their way awkwardly down.

Hugh had only three shells in his rifle, hence his call for assistance. . . . By the time Carl arrived he had accounted for two, but was then in a very precarious position . . . About 20 yards from the tree, with three huge bears poised in the lower branches. Carl arrived just in time, and accounted for two more, while one managed to scramble into the underbrush, and escaped . . . Score, four black bears.

Two or three days later, Carl Alt-house, this time with Claude Salmond as partner, were engaged in cutting pulpwood, not far from the hamlet of High Tor, when their dog started barking excitedly. Their shack had been broken open twice previously, and had been ransacked of every scrap of food, and again bed clothes and curtains had been torn to shreds.

They seized their guns, and followed their dog. The dog, gaining more courage at their appearance, rushed into the bush ahead of them. They were just in time to sight a large, black bear, standing erect, with his paws against a large poplar tree, which it seemed about to climb. On seeing them, it apparently changed its mind, and disappeared into the thick underbrush.

They followed it for some time, but were unable to catch up with it, and as it was nearing dusk, they decided to return to their shack, when Claude happened to mention that he had noticed the top branches of the tree they had located the bear under, moving and shaking in a very unusual manner. They decided to investigate. They got another surprise. Away at the top, they sighted two cubs clinging precariously to the branches. They were not too keen on taking action right then, for it was dangerous enough to tackle a mother bear with cubs in the day time, and it was getting pretty dark.

Claude mentioned that he had heard that if you hung a light on the lower branches of a tree that temporarily housed a bear, it would be scared to come down past the light. . . . They resolved to try anything once, so they obtained a lantern from their shack, and hung it on one of the lower branches. And so to bed.

EARLY next morning they were back at the tree. Their strategy had worked even better than they had hoped. . . . At the top of the tree, they were astonished to view one mother bear and two yearling cubs. The old bear had apparently dared the light to go to the assistance of her cubs, but had either been unable to persuade the cubs to pass the light to safety, or had been too scared herself.

Claude and Carl went promptly into action, killing the old bear first, and then accounting for the two cubs. They did not feel very good about this, but had been tired of losing their grub and bed clothes, especially as they were 30 miles from the means of replenishing their supplies. . . . At any rate, their shack was never molested again, and as the hides were worth money, they were better off financially, at a time when they needed it most.



What's come over me - these days?

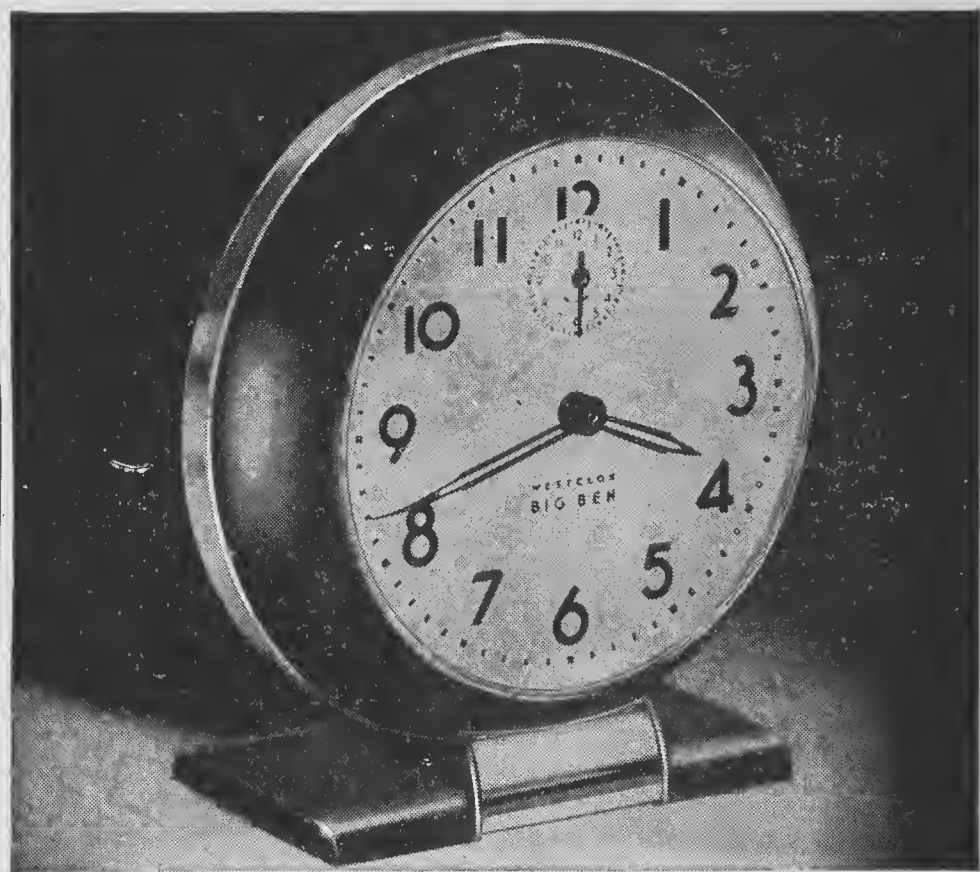
Often a woman becomes panicky and gives way to fears and nerves—when perfectly natural changes are taking place in her system. And the unfortunate part is that these dark dreads and fears may cause a nervous breakdown . . . needlessly!

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physically and mentally—with no condition of "nerves" to magnify the slightest change—you can keep serene and happy right through the most trying times.

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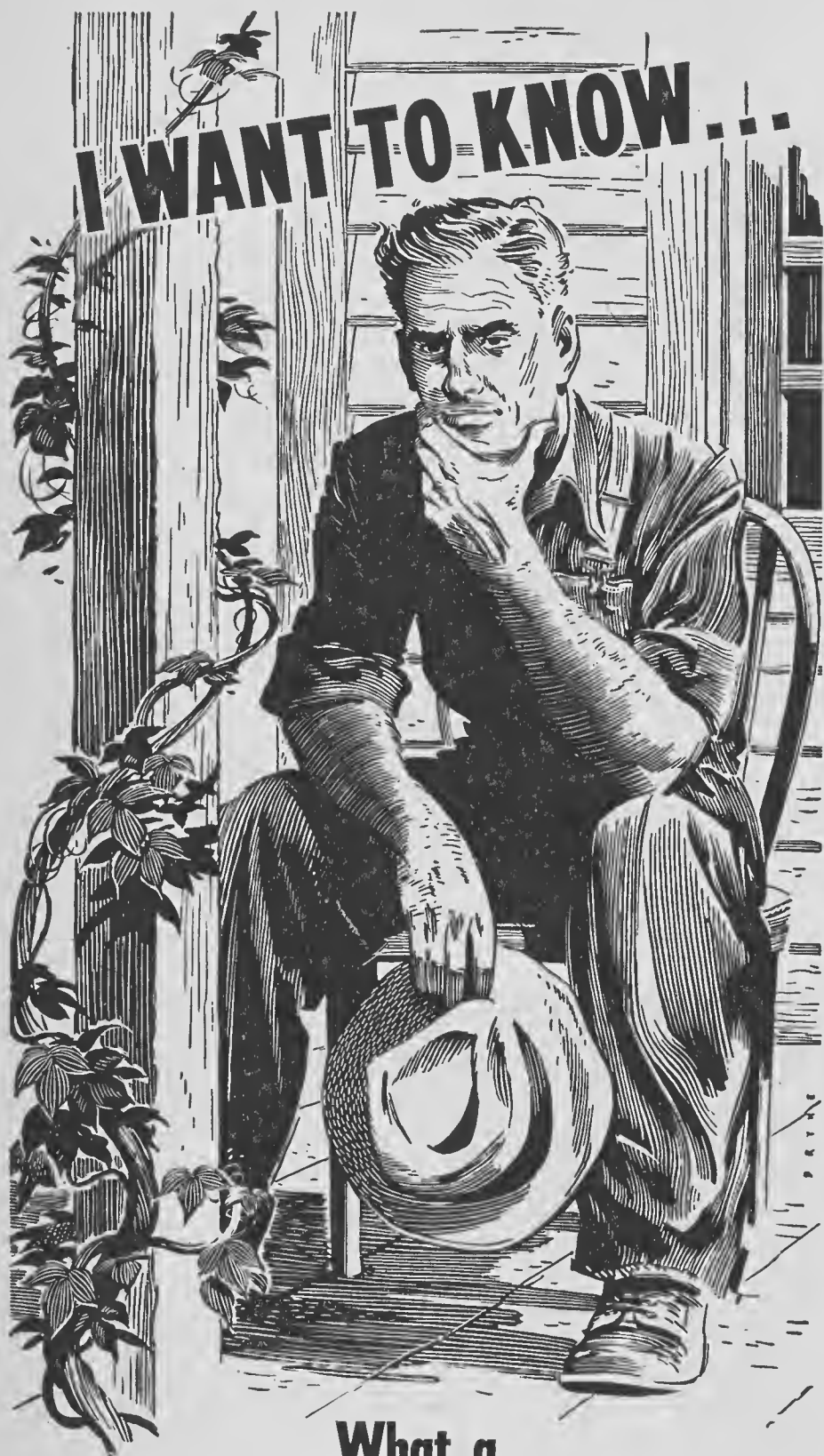
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The Turning Point

Continued from page 9

"But there's more to it than that!" she laughed.

His face burned; he was trying to remember what name he had given old MacDowell; unaccountably it seemed to evade him, and again he hated to lie to this girl.

"Hazlett," he said at last.

Her eyes met his for an instant and he thought there was a questioning look in them, but she wrote his name down mechanically on a slip of paper on the desk.

"John Hazlett."

IT had a bizarre effect; he knew that it would be hard to get used to it. He stared at it oddly himself, then suddenly aware that his look might be a self-betrayal, he averted his eyes, conscious that he had lost the thread of the talk between Jane Keller and the nurse; but Jane was sorting the mail for her.

"Here are yours, Fanny, and some for Max." She held them out, and the nurse, gathering them all up, departed hastily toward the sick-room.

The man's eyes followed her intently, not with any observation of the woman herself, but as if the door, that she presently opened and closed behind her, had a fascination for him. For a moment he forgot where he was, scarcely sensed the unfamiliar outlines of the old ranch-house hall, and was only conscious of Stenhart—not a hundred feet away! But the girl beside him leaned forward and, taking a pencil from the desk, drew a line under the two words that she had previously written on the slip of paper.

"John Hazlett," she repeated quietly; then lifting her honest eyes to his, she added: "That's not your name."

Her look threw him a challenge even more forceful than her words. Again he felt the hot blood rush to his face, but he straightened himself. Her eyes seemed to reach to something deep down in his consciousness. A strange confusion swept him; his mouth went dry. He could not meet her with another falsehood; there was something about her that seemed to drag the truth out of him.

"You're right," he admitted harshly, "it's not my name."

SHE stood a moment silent, the wind from the open window beside them stirring her dark, soft hair, then she bent down and lit a small lamp on the desk.

"Isn't that an unusual thing for a stranger to admit so easily?" she asked. "I scarcely know what I ought to do about it—but," she hesitated, "I don't believe you've come here with any thought of harming us, and—well, it's this way, Jim and I have often talked it over, so many men come West to get a new start, to retrieve mistakes—if they can: We've felt they ought to have a fair chance, that a man must have a chance to come back! I—" she gave him a frank smile—"you won't fail me, will you, if I ask no questions but give you fairly your chance here—to make good?"

She saw his grey eyes darken and there were hard lines about his lips; he seemed suddenly older than she had thought him. Then he pulled

himself together and met her look squarely.

"You may trust me so far—I came here with no thought of harm to you or your brother, I can affirm that on my soul!" he declared hoarsely.

She nodded. "I'm sure of it, and, because I'm sure of it, I'm going to give you your fair chance. I'm not even asking your true name, but—" she smiled again and held out her hand—"I ask you to make good."

He had a confused consciousness of the touch of her soft, cool fingers and an overwhelming impulse to speak out, to tell her all, swept him. He paled under his tan and their eyes held each other. It seemed as if he must speak, then there was a flash in the night outside the window, a sharp report and something ripped through his sleeve and spat on the wall behind them.

Jane gave a startled cry, but before she could move, almost before she could think, the man beside her had put out the lights; he seemed to do it with one sweep of his arm. Then she felt herself lifted and put back beyond the window.

"Keep still—I'll get him!"

His voice was in her ear. She had felt his strong arms as he swept her out of danger, and she made out his figure as he leaped through the window.

THERE was another sharp report and then the sound of a struggle outside. The girl fled lightly to the kitchen to give the alarm; she must rouse the men, who she knew were at supper. It must be Jordan, and Jordan was a hard man to handle. Suddenly she felt a thrill of fear for the man who had leaped out in the dark; he mustn't be hurt, he mustn't! It did not seem to her at the moment that he was a stranger. He was a brave man; she had seen his face when he swept out the lights. She ran, panting, to get help for him.

At the moment he needed it. He had leaped out on a crouching figure, there had been a struggle for the pistol, and then the two rolled over on the turf, fighting silently, desperately, each man trying to get the other's throat. In the dark, Jordan had the advantage; he knew the ground, knew where the slope would set his adversary rolling down over a ledge of rock. Struggling and cursing, he dragged that way. He had long arms and an iron grip, but he had met his match; this man whom he had never seen before had been trained in a hard school. He rolled Jordan over and got his hand almost on his throat, then suddenly they both went over the ledge. Below it, Jane had planted poppies. The two men fell together, struck and unclenched. Jordan leaped up and ran. His antagonist had struck his head on a stone, and there was an instant in which he saw stars and heard the shouts from the house; Jane had roused the *vacqueros*!

He rose dizzily to his feet, brushed his hand across his eyes, and tried to discern the fleeing figure. The moon was just rising behind the mountains; the sky was silver with it, but the earth was dark, like the bottom of a cup. He ran forward, stumbling now and then on strange ground, but, as the sky brightened, he made out the dark figure ahead of him, still running. He did not know where they were going. Behind them was a con-

fusion of sounds, in front he began to hear the cattle in the corrals, but he kept on.

A flame shot out ahead of him. He made out the stooping figure of a man; something like a torch shot up in the air, hurtled forward and fell blazing. As it fell he saw that the gates were open and things were moving. He heard bellows of terror, saw horns flash in the light of a blazing torch, and the very earth shook under his feet. A flood of dark, seething, writhing shapes poured out. Another torch blazed on the other side, another herd broke loose, the gates caught fire, the night was ablaze with flame and smoke, and bellowing animals were rushing together in a great stampede. One herd rushed at the blaze, another trampled over it, with pounding hoofs and whirling horns; bellowing with terror, the cattle stampeded. In the nick of time, the young man sprang behind a huge old tree trunk and the red stream parted and flowed past him. Dust blinded him, but he heard the trampling of horses and the shouts of the *vacqueros*; they were riding down from the house and he caught a wild cry from the man whom Mac had called "Pete."

"By gosh, he's let loose the yearlings; the gates are afire!"

Not only the gates, but some piled brushwood had caught. The flames leaped up ten feet in the wind and sent out long, black streamers over the bellowing herd and the wild figures of the riders. The *vacqueros* shouted and whirled their quirts, trying to stem the tide, but the yearlings were wild. Some of them were splashing and floundering in the creek, some headed straight for the canyons, but a few plunged into the flames and came out smoking mad. Bellowing with pain and fury, they charged at the shouting herders. Here a horse was gored, there a rider went down and the horse bolted for the stables. The brightening sky was streaked with black smoke clouds, pandemonium reigned.

The man who had called himself "Hazlett" straightened against his tree; he saw a riderless horse coming, his bridle flying loose. With a leap he reached the frightened animal's head, caught the reins and clung by

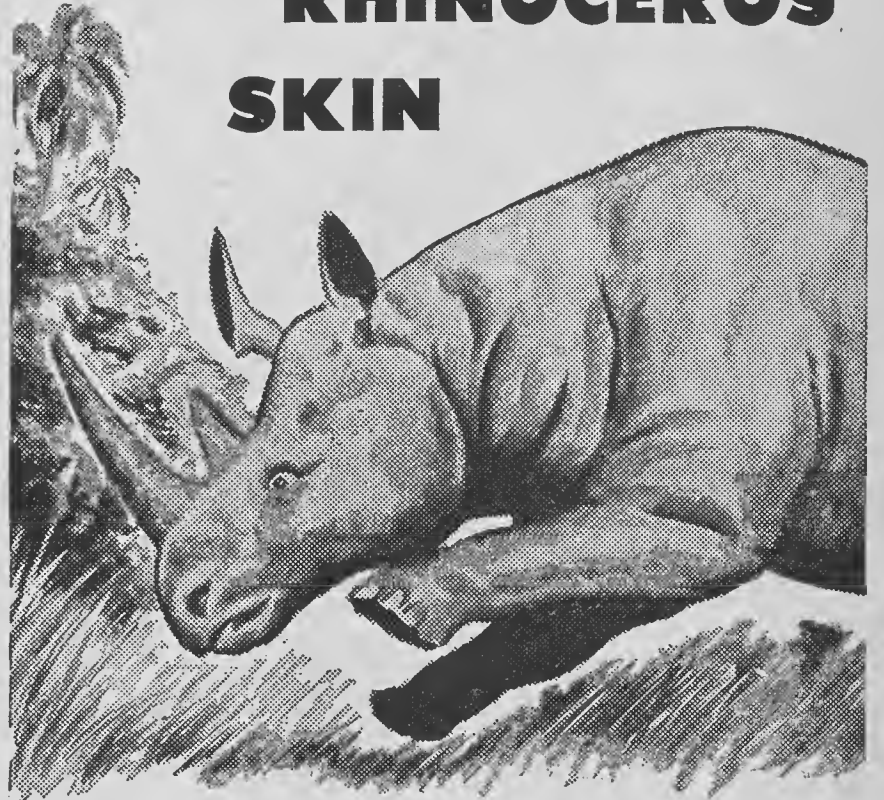
main force. There was an instant of intense action, the horse plunging and kicking, then the man conquered and scrambled to the saddle. The flames seemed to have gained new fuel; when they died down in one place, they leaped up in another. Everything that could burn was afire. The wind carried burning brands and tossed them on madly whirling horns, bulls gored each other in sheer terror; the distant ranch-house shone white in the reflection, the mountains loomed black against a silver sky.

THE young man who had never seen the like of this before, held in the frightened horse and thrilled with a new emotion; he tasted freedom, adventure, the joy of living. He knew nothing of herding these wild things, but he longed to ride into the midst of it, though he felt his horse trembling under him. Then, in a flash, he saw a big car speeding toward him; the moonlight showed it clearly, when it stopped and a man leaped out and came running into the thick of it. As he came he recognized him; it was Jim Keller; back before he was expected. A moment before he would have been safe, but the herd had broken, some of the yearlings had turned before the shouts of the *vacqueros*. With a rush they came straight for the single figure in front of them; in half a second it would be too late! Hazlett had no spurs, but he struck his heels into his horse's sides. Frightened, the animal shot forward in front of the on-coming rush, in front of Jim.

"Keep behind my horse—quick!" The young man felt in his pocket as he saw Jim stop and reel with surprise. He rode his horse across the space and turned to face the danger.

FLAME and moonlight outlined the black forms and white horns, 50—60—he could not count them. The earth seemed to shake under them; his horse plunged and he swung in his seat. They were coming, they were almost on him, they would trample horse and rider! Then he did the one thing he could think of, he fired point blank at the front row. There was a terrible plunge and bellow, and a big steer crumpled and fell to its knees. Its mates fled from it, parting

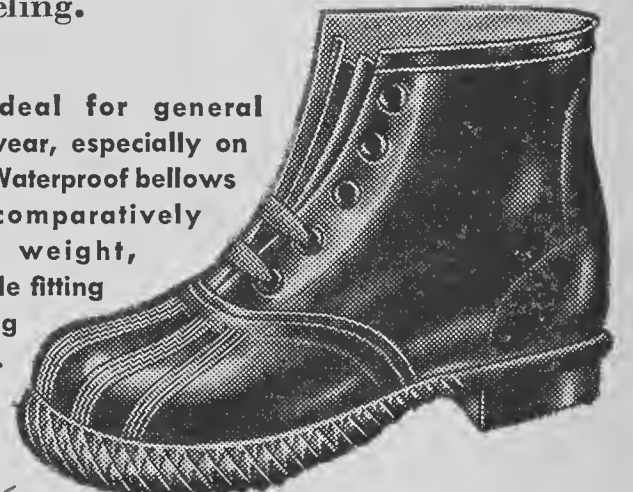
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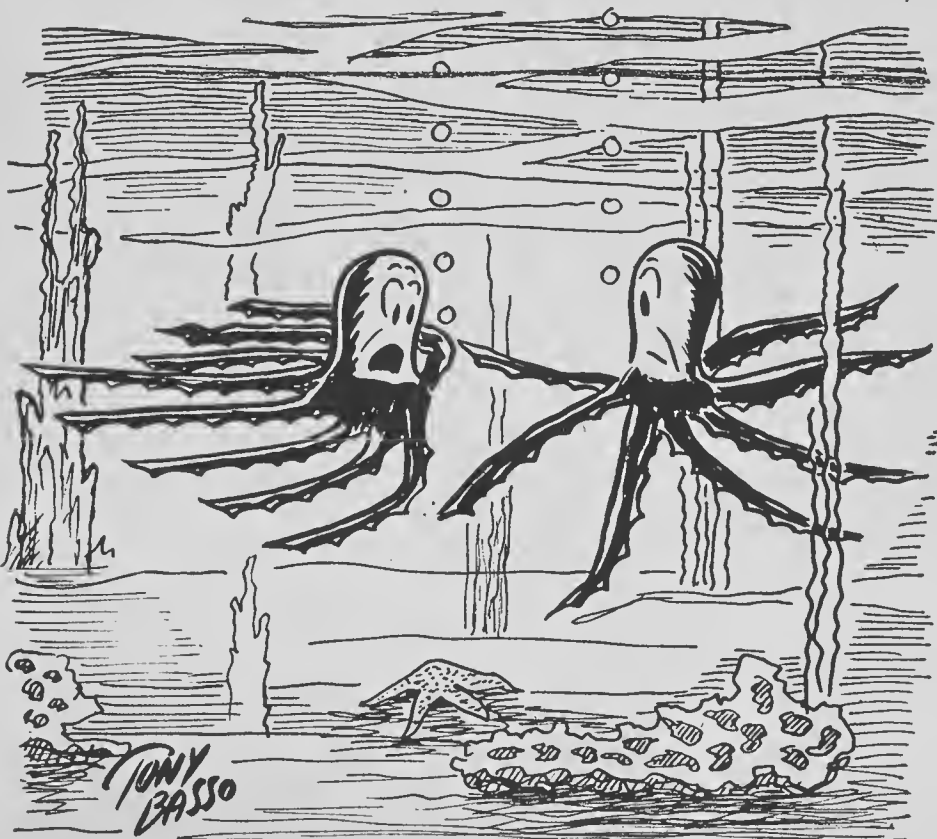
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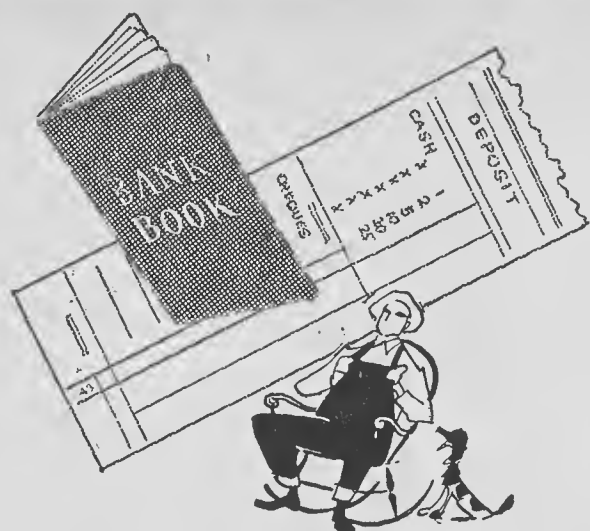
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in two streams and flowing on either side. In the centre the horse and rider whirled in a wild semi-circle, shielding the man on foot. Again and again he fired, and, when he hit, they gave way, bellowing. Flames were behind them, the *vacqueros* were shouting on their right; they hurtled themselves at the bridge, jammed it, toppled over and went into the water. As the stream of maddened beasts parted and swept past and left them, the young man dismounted.

"Take my horse, Mr. Keller," he said.

Jim looked up at him, dazed. "Who are you? My God, I was a fool; you saved my life!"

THE dawn was breaking behind the mountains when Hazlett limped up toward the house. He had been with the other men in the saddle all night. As the day broke the *vacqueros* had been able to count the damage—the burning gates and brush, the stampeded yearlings, two horses gored to death and a heavy toll of cattle. Meanwhile, Jordan and his confederates had made good their escape; that hit the enraged cow-punchers more sharply than Keller's losses. Hazlett could hear them swearing in a queer medley of Spanish and English. By this time they all knew of Jim's narrow escape and made room for the newcomer more readily, but they drifted past him now to storm Ah Ling's kitchen. Hazlett came slowly, his eyes on those windows into which he had looked the night before. Stenhart's stricken face seemed to rise before him again. He laughed bitterly to himself, then old Mac, coming out of the house, saw him and stopped to slap him on the shoulder with his well hand.

"Gosh, you're a trump, Hazlett!" he said heartily. "You sure saved the boss. He wants to see you; I reckon you can get any place you want round Las Palomas now!"

Hazlett stared down at the mud and dust that covered him from head to foot.

"See me? Now?" he gasped, thinking of Jane, "I must get a bath somehow—better jump in the creek with my clothes on, hadn't I?"

"Afterwards — afterwards," urged MacDowell heartily. "Go right in now, you're wanted. If you'd only caught Jordan—Jane says you tried, leaped right out on him!"

"He nearly broke my head; the honors are his," retorted the younger man grimly.

Old Mac nodded. "That's like him, the fox! Come on over to breakfast after you've seen Jim."

"Where is he?" Hazlett was red with reluctance, but he saw no way to evade the inevitable.

MAC pointed toward the front door and the young man, still reluctant, crossed the wide veranda and entered the hall. There was no one in sight; the sun had not yet topped the mountains and that long corridor was shadowed by day-gloom. Far down was a door that shut in Stenhart! Involuntarily the newcomer took a step toward it, then he heard a quick movement across the hall, a door opened and Jane came to him, both hands outstretched.

"You've made good," she said, her

eyes shining, "you've more than made good; Jim told me!"

For the second time her soft, cool fingers touched his, her clear blue eyes looked into his, and he wavered. He reddened to his hair and felt his purpose growing soft at her touch!

"It's nothing," he said hoarsely, "an accident. I'm no skilled cow-puncher and I shot up your brother's steers, broke legs and did no end of damage."

"You saved Jim!"

"Which makes me happy," he said, smiling, "but I take no credit. I had luck, that's all."

The girl, leaning back against the wall behind her, studied him gravely.

"You don't like to be thanked and you won't tell me your name. Can't you—trust me?"

"If I told you I couldn't stay here, and I want to stay!" His voice shook. In the shadowed hall she could see that he paled to the lips, but his eyes held hers.

"You will stay?" she exclaimed, and her hands trembled slightly as she pressed them against the wall behind her. "Don't you realize that you saved my brother? We're in your debt."

"There's no debt about it—it was my good luck; you owe me nothing," he replied gravely. "If I should tell you why I came across those mountains you might send me away."

She was silent for a moment, and her eyes looked at him steadily, gravely. She seemed to challenge him.

"I haven't told my brother," she said simply. "He's going to do all he can for you; he's in bed now—I made him go, he was worn out—but you'll see him later. I told him nothing."

HAZLETT was shaken; he stood staring at the first rays of sunshine on the threshold of the open door.

"Which makes me your debtor," he said at last, hoarsely. Then he turned and saw her fine face and her clear eyes and choked back the words that came, ending abruptly: "Why didn't you tell him?"

"I didn't tell—" she hesitated, and added quickly—"because I want you to stay!"

"You—you want me to stay?" he exclaimed, his face aflame.

He got no answer. Quick as a flash Jane opened the door behind her, slipped in and shut it in his face.

For a moment he stood, staring at the door in a strange tumult of feeling—she wanted him to stay! He passed his shaking hand across his eyes; there was a lump in his throat. Then, suddenly, a door opened far down the corridor and he heard Stenhart's voice. It rang strong and hearty; the invalid was getting well! It was like an electric shock to Hazlett. He straightened himself, turned sharply and went out of the house.

The sun had risen, the wide acres of the ranch were bathed in beauty, doves were cooing in the trees, Jane's roses filled the air with fragrance. He turned and was going toward the creek. He had forgotten that he was hungry until he heard old Mac shouting at him.

"Grub's waitin'!"

The old man was beckoning from the low adobe in the rear. Hazlett followed him into the bunkhouse. The *vacqueros* had bolted their food and returned to the work of hunting up the strays. There was no one about but MacDowell, Ah Ling and old

Teresa, the housekeeper. The little brown woman chose to wait on the stranger herself.

"YOU saved the senor," she said, gazing at the young man with intent dark eyes.

He laughed. "By accident. I'm not much of a cow-puncher, Teresa!"

"Madre de Dios, but you are a brave man, senor!" she replied filling his cup with Ah Ling's strong coffee.

"Teresa likes you a heap better'n she likes Stenhart," laughed old Mac, lighting his pipe.

Hazlett looked around at the little old woman. "So you don't like Stenhart?"

She shook her head violently, crossing herself. "He has got a devil, senor!"

The young man laughed loudly, thrusting his plate aside. "Come," he said, "tell me—what sort of a devil?"

Teresa only shook her head more violently than ever.

Old Mac, taking his pipe out of his mouth, laughed outright. "What you goin' to do, Teresa, when he marries Jane?"

"God forbid!" said Teresa, rolling up her eyes.

"I heard it was comin' off soon as he got well," teased Mac.

The old woman gave him a ferocious look, scowling like a witch. "Ca! Then I will tell her," she said bitterly, "I will tell her what kind of dreams he is having!"

MacDowell chuckled. "Dreams? Nightmare, I reckon—hello, there he is now; they've got him out under the trees, Jane an' th' nurse. First time, too!"

As he spoke he pointed out of the window, and Hazlett saw the three figures under a group of live oaks. Fanny Sewell was seating the convalescent in a large wicker armchair while Jane stood talking to them.

Teresa, crossing herself and mumbling, retreated suddenly on Ah Ling, and upset a dish of fried potatoes. The Chinaman began to scold loudly and old Mac laughed at them. It gave Hazlett his chance; he rose and went out quickly, standing still in the shadow of the house and watching the group under the trees. The morning light was wonderful, he could see every object clearly. Stenhart looked thin and pale. Fanny Sewell, needing something she had left indoors, turned and went back to the house. Jane was alone with Stenhart. The man watching them turned white; he had no difficulty in seeing that Stenhart was taking advantage of his opportunity. He was leaning forward now to plead with the girl. And Jane? The watcher could see that she blushed. For one tense moment he meant to intervene, it was more than he could bear; then she laughed at the man, turning away.

"You're a lot better, Max!" she teased, and her fresh, young voice came clearly to Hazlett's ears.

STENHART answered inaudibly, stretching out his hand, trying to detain her. Jane laughed at him again. Meanwhile, the trained nurse, coming to the door of the house, called Teresa.

Hazlett heard the slap of moccasins on the stone floor behind him. He stepped back and caught old Teresa by the arm before she came in sight of the others.

"Don't go yet," he said, in a low

voice. "If you go with the nurse—Miss Keller will be left alone with Stenhart!"

The little old woman stared up at the big stranger.

"Madre de Dios!" she said below her breath. "You hate him, too, eh?"

Hazlett nodded grimly. "He and I are old acquaintances, Teresa. Come—tell me what he dreams about?"

The old woman shrank. "I promise the nurse; I cannot tell, senor!"

He frowned. What was it that the fair haired nurse and the little brown woman were hiding from Jane? Had Stenhart told things in his sleep? He pressed his hand hard on the woman's wrist.

"Tell me! See, if I knew I might keep him from marrying her."

Teresa looked up at him with shrewd, dark eyes. "I do not know you, senor!"

"But you like me better than Stenhart?"

"Tck! I like a bad tooth better, senor!"

"But you won't betray him? You—"

"Teresa! Oh, Teresa!" called Jane's young voice close at hand. She was going up to the house to answer Fanny's summons.

Teresa broke away and ran after her, and together, the three women went into the house.

Stenhart sat alone under the trees, a paper open in his hand.

HAZLETT stood a moment longer, listening to Ah Ling's chatter with old Mac. He could smell the strong tobacco in the old man's pipe. Stenhart's dark head was bent over his newspaper. His profile was handsome, clean-cut as a cameo; his hands looked thin and white. Far off by the corrals some men were building a new gate, and the distant sound of their hammers came on the wind. The stranger left the shelter of the low adobe and walked swiftly over to the trees. On the turf his footsteps made no sound. The paper rustled in the invalid's long fingers, and he stirred uneasily, as if he felt a presence, and looked up. The paper dropped to the ground and he covered in his chair.

"My God, Sherwin, you! How did you come here?"

The young man, standing in the sunlight, looked back at him, quite unmoved.

"So you know me? I came a long way, Stenhart. Look well at me—I came to kill you!"

In the terrible silence the hammers seemed to grow clamorous. Stenhart tried to rise.

"I'll call help—I'm still a sick man, John Sherwin!" he babbled wildly.

Sherwin thrust him back in his chair. "You coward!" he said bitterly. "You'll have your chance; I don't deal blows in secret—as you do!"

Stenhart groaned. "You're crazy—I always said you were! How did you get here?"

"That's no affair of yours! I came to kill you."

Stenhart gripped the arms of his chair with shaking hands; he was not a well man but he tried to summon his old courage. "I'll raise the alarm—why, I can settle you in five minutes, Sherwin!"

Sherwin's eyes glinted like steel. "Can you? Try it!"

Stenhart tried again to rise, then something in the other man's look held him, he shrank. "My God, what do

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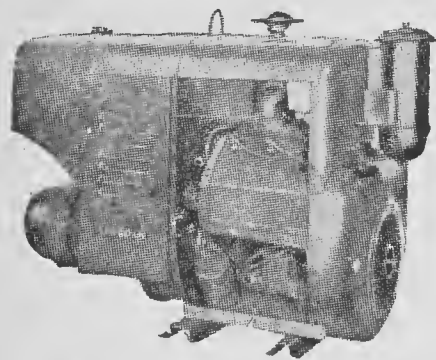
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you mean to do? You—you can't kill me out here—in cold blood!"

"I can," replied his tormentor, "but I mean to let you think about it, imagine it, wonder how I mean to do it. It would be too pleasant if I finished you now!"

Hope kindled in the other's eyes; he knew a way to end this braggart.

"I'm obliged to you for a respite," he said mockingly; "thank you!"

But it was Sherwin who laughed, and the sound of his mirth sent a horrible chill through Stenhart.

"I know your plan, friend Max," he said coolly, "but it can't save you. I shall kill you just the same—only a little more quickly."

STENHART'S courage began to rise, his face reddened. "You'll not stay here; I'll make Las Palomas too hot for you! You'll see. I can make any place too hot for you."

Sherwin looked at him steadily for an instant, then he spoke as steadily.

"It wouldn't save you, Stenhart—nothing will save you—but the sooner you drop that stuff the longer—you'll live. Get me?"

Stenhart writhed in his chair. "You can't do it! You don't mean to do it! You're threatening me to—to hush me up!"

Sherwin bent down and, grasping the arms of his chair, he looked deep into his eyes. "You know what I've endured, you know what you did—do you think that I wouldn't kill you?"

Stenhart, staring back into those steel grey eyes, wavered and blanched. He was still weak from illness; his limbs shook.

"You—you fiend!" he gasped.

"You call me a fiend—what do you call yourself, you liar?" Sherwin's voice was low but it was terrible. He let go the arms of the chair and straightened himself. "You're half sick still. I'll let you get your strength first, but—I shall kill you presently."

Stenhart said nothing; he was shaking now from head to foot. Something deeper than his fear of Sherwin shook him. He set his teeth, but they chattered.

Sherwin, watching him, laughed. Then he looked toward the house and saw Fanny Sewell emerge, carrying a tray.

"Your nurse is coming," he said to the invalid. "Get your strength quickly; I don't care to kill a sick man, Stenhart."

Stenhart leaned back in his chair and shut his eyes. He was feigning more weakness than he felt; he was trying to plan some way to rid himself of this peril, for he knew that Sherwin meant every word he said. He would kill him! Though his eyes were closed, he listened keenly and he heard Sherwin's footsteps retreating across the grass; then came the rustle of a woman's skirt and he looked up and saw Fanny Sewell coming with her little tray. The sun was shining on her fair hair and her serene face, and he tried to think he had just awakened from a nightmare.

Sherwin, passing the young nurse, went to the house. The door stood open and he entered, going at once to Jim's desk. He had promised Jane to straighten the accounts; mechanically he sat down to his task, but his mind was full of the scene under the trees, of Stenhart's aghast face. He drew a deep breath and his clenched fist struck the desk sharply, rattling its

shabby litter out of the pigeonholes. He had no pity for Stenhart's apparent weakness; he had evidently been near death and he was glad that he had not died. If he had died he would have escaped. Sherwin knew that he did not want him to escape in that way; it would be too easy, too gentle an end. A sudden fury swept him; some primal passion, some instinct of vengeance inherited from a primitive ancestor, a caveman or a pirate, possessed him. It was all he could do to keep his seat there, not to rush out again and confront the man. The effort shook him; he saw the perspiration start out in beads on his hands. Then he controlled himself sternly. There was plenty of time, nothing could interfere now—he had found him, found the coward—

THERE was a little rustle of paper; a breeze from the window had got among the papers that his violence had shaken out of the pigeonholes. It lifted a thin tissue covering a flat cardboard and rustled it. As Sherwin looked down it blew the thin paper completely away and he saw what it had covered. A photograph, the photograph of a very young girl, her hair in braids on her slim shoulders, her chin lifted, her eyes looking up at him, a smile on her full, young lips—Jane! Unconsciously a great change came over him; the blood rushed to his face, his eyes softened. He held the picture in his hands, looking at it steadily. It had been taken perhaps four years before. The face was almost childish, but the clear, straight look was there; a woman like that might keep a man from—from crime! And Stenhart dared to be in love with her! Well, he should not get her. Sherwin smiled grimly at the thought, then his face changed; her honest eyes seemed to challenge him to "make good."

He heard a sound somewhere, someone moving on the veranda, and slipped the photograph into his pocket. He had no right to it, but he could not leave it there in the litter of the old desk.


He had opened the dog-eared account books again. "I'll try to make good on these, anyway," he thought, and smiled for the first time as he began to run down Jim's slovenly figures. But he hardly reached the foot of the column before he heard a quick step behind him and Jim himself came in, dusty and fagged.

"Hello, Hazlett. Quit that stuff, I've got something else on hand." As he spoke he flung himself into a chair and mopped his forehead. "Got most of the strays back, but I've lost about 80 yearlings, besides those you made into beef," he added, with a grin.

"Sorry," Sherwin began, "but—"

"No regrets!" Jim laughed. "You can ride, I know that. The men are all busy and I want you to ride over to Hemmings' place, it's about fifteen miles, and get the sheriff. He's over there now. Take him along with you and show him the place where Jordan ran past you—you know, on the high-road. We think he's got some of his rustlers there. Anyway, he's cleared out of this neighborhood, and I want Cutler—that's the sheriff—to know it. You know the locality where Jordan dodged. Mac'll give you a fast horse. Better go right away."

Sherwin was staring fixedly at the books in front of him. He said



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nothing, and, after a moment, Jim looked around at him.

"Well?" he said interrogatively.

"I don't know the roads; I'll lose time finding the place—Hemmings', I mean. Hadn't you better send someone who knows the way?"

"I've got no one who knows where you saw Jordan. Besides, the road to Hemmings' place is straight, you can't miss it. All the men are busy, and I'm used up. You can make it before Cutler takes a false trail. Here, I'll draw you a map—" Jim reached for a pencil. As he did so he caught a glimpse of the other man's face and whistled, then he laughed. "See here, Hazlett, what's wrong—you're not afraid to meet the sheriff, are you?" he asked lightly.

Sherwin's face whitened. He rose. "I'll go at once, sir," he said gravely; "where's the house?"

Jim struck his hand on the desk. "Here, I say, don't take it like that. I was joking!"

Sherwin met his eyes squarely. "It's the kind of joke I don't like," he replied coldly.

Something in the man's eyes made Jim lean back in his chair and observe him closely. But he turned the matter off as well as he could.

"Sorry! I owe you an apology. But you'll go?"

Sherwin's reply was a mute gesture of assent as he turned toward the door. Jim, feeling that he owed his life to this stranger, called after him.

"I didn't mean that, remember! Mac'll give you a good horse. Come back with the sheriff; I want to show him the damage here."

SHERWIN nodded, went out and crossed the veranda to the lawn. Under the trees he saw a pretty tableau. Fanny Sewell was reading aloud to the convalescent, and going away from them, across the flower-dotted slope that led to the creek, was Jane. Sherwin saw the sunlight on her uncovered head. She did not see him, nor did Stenhart. He, too, was watching Jane. Sherwin's hand clenched at his side but he walked rapidly across the open space and went to the stables.

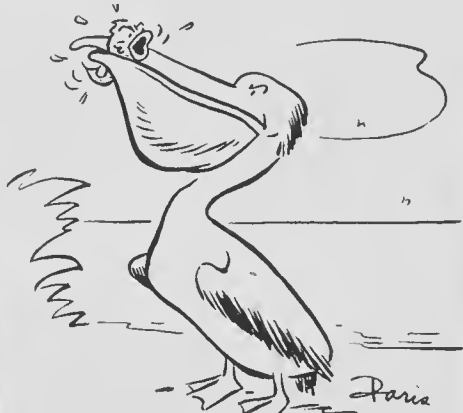
Old Mac was there with his arm in a sling, but he had already had his orders from Jim, and one of the stablemen had a fast horse saddled.

"Jim says you're to go after the sheriff. He thinks Jordan's made off"—the old man shrugged.

"I see you don't agree with that," said Sherwin, as he sprang into the saddle.

"A fox mostly doubles," Mac replied. "Look out for yourself, lad; Jordan may remember the rough an' tumble you had together."

Sherwin leaned down from the saddle, holding out his hand. "In



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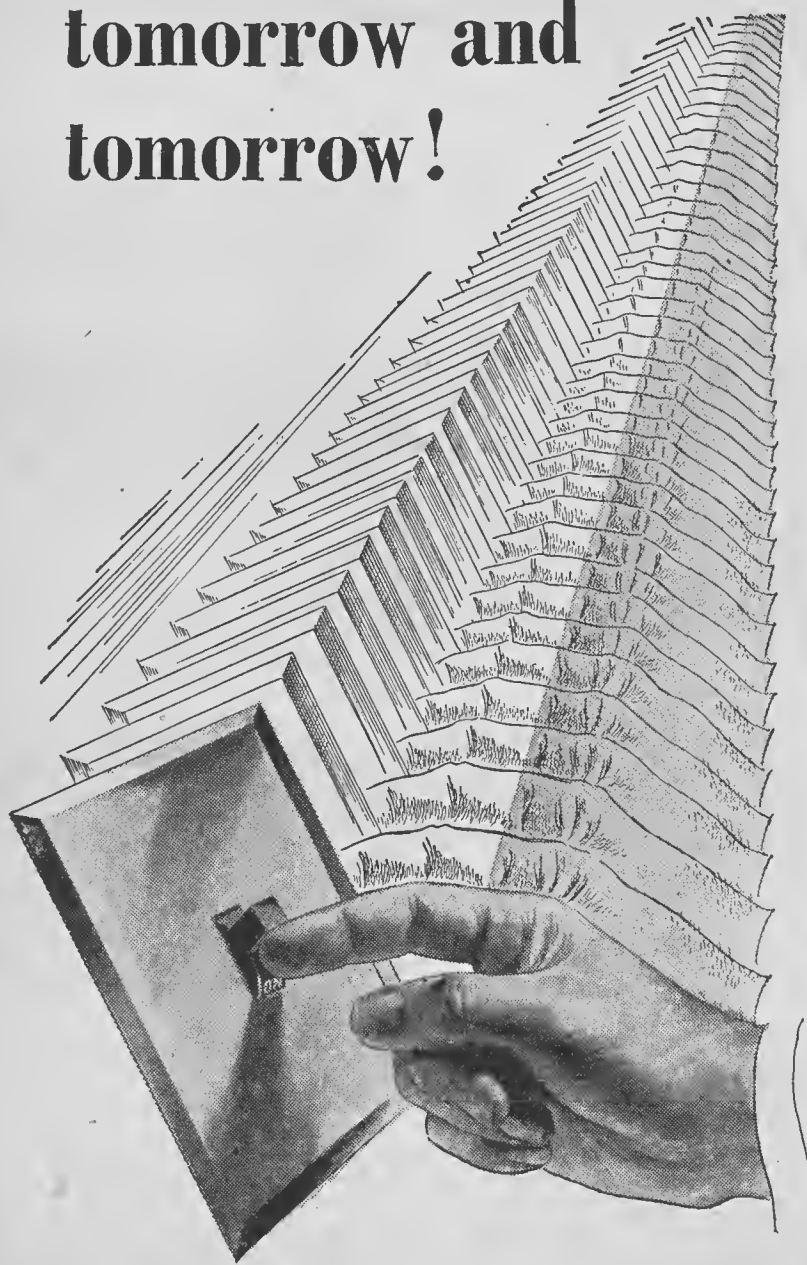
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case he does, goodbye, and thank you!" he said.

"What d'you mean—" old MacDowell stared in astonishment, but the young man was off at a gallop. He heard his horse's hoofs on the bridge before he got his breath. "Well, I swum! Spoke like he wasn't comin' back!"

Which was, in fact, what Sherwin thought. Not because of Jordan!

As he rode his mind worked quickly. Across the bridge he drew rein an instant, felt in his pocket and drew out a newspaper two days old. He read a paragraph and shook his head. It was too great a risk to ride to Hemmings' place—he must give up his vantage-ground, his chance to be near Stenhart. The way that Jim had sent him lay to the west. He did not take it, but turned east. The road here was skirted by the creek and, half a mile farther, it ascended and commanded a view of Las Palomas. Sherwin followed it. Here, at the very beginning, fate had forced his hand more neatly than ever Stenhart could have done it. If he turned back and went to meet the sheriff—? There was a chance, one in a million, that he could carry it off, but if he did not, then he lost all chance at Stenhart. But if he went on to the east—then he must lose his point of vantage and he would never see Jane Keller again!

What madness to think of the girl! Sherwin knew it, but he was young and her clear eyes held him. He heard still her voice when she told him to "make good!"

And he was going—like a craven! Suddenly he turned his horse's head. He would go back; he'd go west and face—the devil, if need be!

SOMETHING stirred in the brush below the road, and he saw the branch of a low hanging tree sway suddenly. Rising in his stirrups he looked through a gap in the foliage. Below him ran the creek. On the farther bank wild flowers bloomed bravely, the sunlight making a carnival of color. He caught a glimmer of white, looked again and saw a figure there. Jane! She must have come this far looking for flowers; he could see her bending down to pull the blossoms. He dropped from the saddle, led his horse into the shelter of some eucalyptus and left him. If there was anyone on this side of the creek he must know it.

Low bushes grew thick along the bank and a flowering vine, sprawling over them, knotted them together. Sherwin could not see far into the dense, green shadows, but he found an opening and slipped on among the spreading branches, dropped to the mossy ground and looked between close-set roots and stems toward the smooth glimmer that was the creek. It was still. There was no sound but Jane's voice; she was singing softly to herself. At first it seemed as if the swinging bough must have been a figment of imagination, but Sherwin knew better. There was no wind—who swung that bough? He waited, holding his breath, for suddenly it came to him that danger threatened Jane. Disarmed by Jim's fixed idea that Jordan had gone they had grown careless; no one was within call. The shadow in the brush was dark, but the sunlight on the water beyond cut

clear outlines. Sherwin became aware of a stealthy sound close to the edge of the creek. He stooped lower and discerned a crouching figure; a man was crawling on his hands and knees toward the water. As he dropped lower to pass under a bough, his head was silhouetted against the light and Sherwin knew him—it was the rustler, Jordan! Instinctively, Sherwin's hand went to his revolver, then it dropped. He dared not shoot. The creek was narrow here and Jane was too near. A miss, and—! He must get the man from behind, pinion his arms, drag him, if need be, into the water and drown him.

Softly he crept after the skulker. There was little sound except the occasional cracking of a twig, and Jordan, making similar sounds, did not seem to notice them. The two crept on, the first almost at the water's edge, the second almost near enough to grasp the crawling legs in front. Jane's voice rose just opposite, singing a Spanish song. Sherwin stretched out his hand and almost got the ankle nearest him; then, suddenly, Jordan faced about and saw him, uttered an oath and plunged into the water, swimming straight for the girl on the opposite side. In an instant, Sherwin divined his plan—he meant to get Jane and dictate his own terms to Jim! He knew that Sherwin could not shoot and endanger the girl. But Sherwin broke through a tangle of vines, plunged into the creek and swam after him. Still, the other man had the advantage. As Sherwin struck the water, Jordan leaped out on the other side and was after the girl.

JANE did not run. She faced her pursuer and tried to fight him off, but Jordan's arms were around her and he had lifted her from the ground when Sherwin came up out of the stream, dripping. Knowing that, while he carried the girl, he was safe from gunfire, Jordan started to run to cover, but, burdened, he was not quick enough. Sherwin leaped forward and, throwing his powerful arms around him, dragged him back. Caught by an iron grip above each elbow, Jordan released Jane and tried to turn on his assailant. There was a moment of wild conflict; the two men struggled, twisted and went down together. Sherwin had no time to draw a weapon and he meant that Jordan should not have a better chance. Wrestling and panting they rolled over, slipping down the bank toward the creek, while Jane tried to help Sherwin, and cried for help.

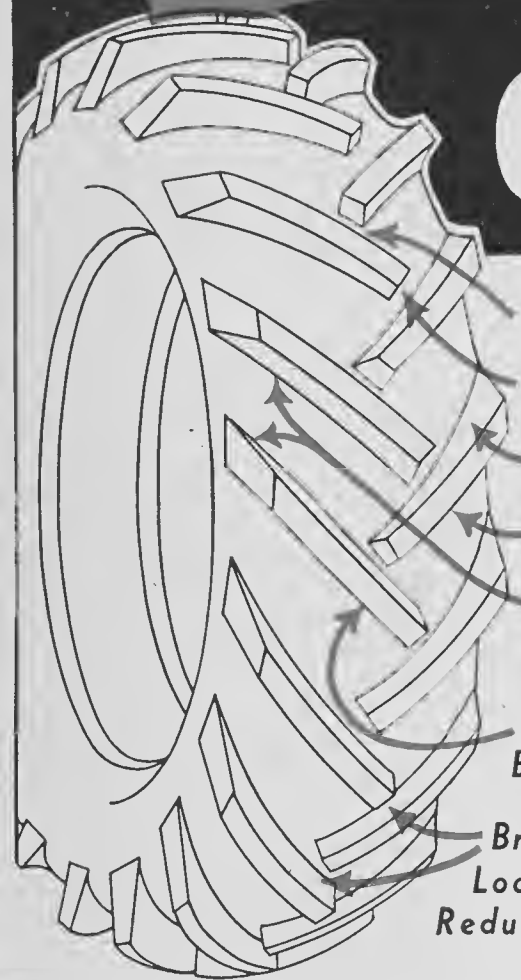
Sherwin twisted and strained at the other man, when they came to a cleft in the bank, fell through it violently and struck water, Jordan uppermost. The force of the contact, the sudden rush of water over his head, loosened Sherwin's grip, and his antagonist drew a knife and struck once, furiously. The blade drove into the other man's arm, and there was a moment more of fierce conflict, the water growing red; then Jordan broke loose and swam ashore. He had crossed the creek. Sherwin still heard Jane's cries and, wounded in the arm, he struck out for the shore and, reaching it, climbed to the top of the bank dizzily. He saw that the girl was there alone and, faint from the loss of blood, sank to his knees beside her.

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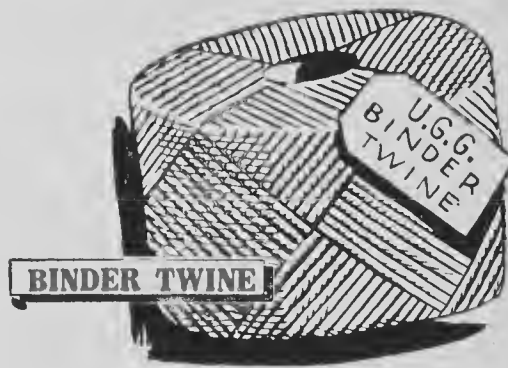
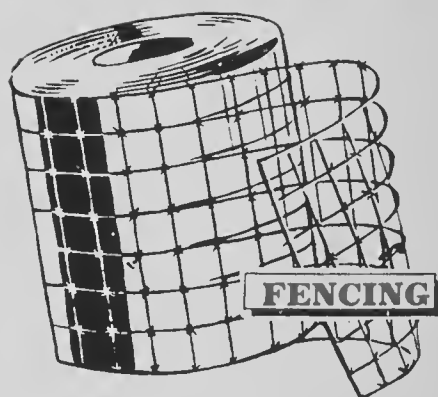
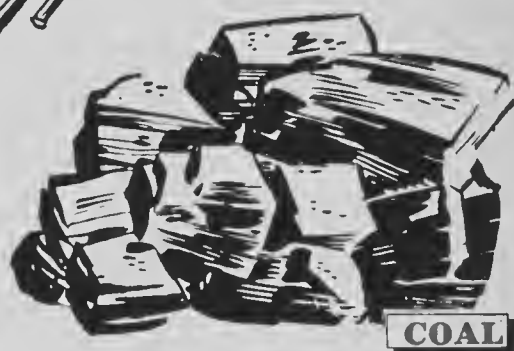
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*Noon is a Butterfly,
Emblazoned, wide-winged,
Wheeling.*

*Night is a Moth,
Pearl-powdered, dove-winged,
Blinded.*

—NAN MOULTON.



Points of interest on public boards and in reading.

by AMY J. ROE

Tom, a son, is attending the University of B.C., and the younger daughter, Katherine, is an Arts student at Queen's University.

Later the family moved to the Caribou area and finally located at Revelstoke, B.C., where Dr. Sutherland continued his medical practice for a number of years, until moving to Parksville in 1947.

As well as teaching and newspaper work, Mary Sutherland has had a variety of experience in other fields. In

1936 she was appointed a member of the Dominion Council of Health and later the same year to the National Employment Commission. In 1939, during a comparative lull in her outside activities, she bought and reorganized the Revelstoke Review, later selling out her share to two partners, with whom she had served as business manager. In 1941 she served in an advisory capacity to the British Columbia Security Commission, charged with the responsibility of evacuating Japanese from Pacific coast areas. Three years later she served as one of four Royal Commissioners to enquire and report on the care given Japanese residents evacuated from their former homes. In 1942 Mrs. Sutherland was appointed a member of the Board of Governors of CBC and is now near the completion of her second three-year term with the CBC Board.

In March, 1947, Dr. and Mrs. Sutherland moved to Parksville, some 20 miles north of Nanaimo, on Vancouver Island. Mrs. Sutherland and a friend, Mrs. Allwood, purchased Island Hall, an attractive old inn, facing on a fine beach. She is an energetic, almost tireless person, strongly convinced that women should play an active part in the political events of their time.

Taste In Reading

PEOPLE who live in lonely places, along a mountainous sea coast, on one of the many little islands off the mainland, in the remote north or on some isolated spot on the prairies, frequently ask for books on travel. They like to read of people and places quite different from their own. On the other hand, many people living in crowded cities, harassed by the pressure of modern life, frequently seek out "retreat" stories. They seem to find refreshment of mind in reading books where the author describes just a few human beings set down among an abundance of natural things such as trees, plants, and animals, each having fascinating characteristics of their own.

A friend who writes often of such quiet things and ways of living told me of interviews recently with eastern publishers who expressed the belief that there is a growing demand for such books. They thought that it was possibly due to the pressure of life today—the conflict of ideas in the world—that people wanted in their leisure moments to escape from it all. About the same time an experienced librarian in British Columbia remarked on the strong demand for travel books for people living in scattered, lonely places along the Pacific coast.

It is worth noting that with the trend of population moving from the country to cities, has come an increase in popularity of "westerns." So too with detective and crime stories. The business or professional man occupied during the day with keeping his office, shop or industry going smoothly turns to light reading for his leisure moments. He will often claim that a light detective story helps switch his mind quickly from his own affairs; that such books are relaxing, being easy to read, and as easy to forget.

During a discussion of this matter of seeking escape or retreat, a physician remarked "that retreat may be the sign of maturity and it is necessary for us at times." But not all our reading should be books and articles of the "escape" type. We read to be informed, to better fit ourselves for life and work. Books are truly "windows on the world." We may be greatly refreshed and stimulated by some substantial book, some classic which puts our powers of comprehension to the test. Such books bring us new understanding. They are food which helps our minds to grow.

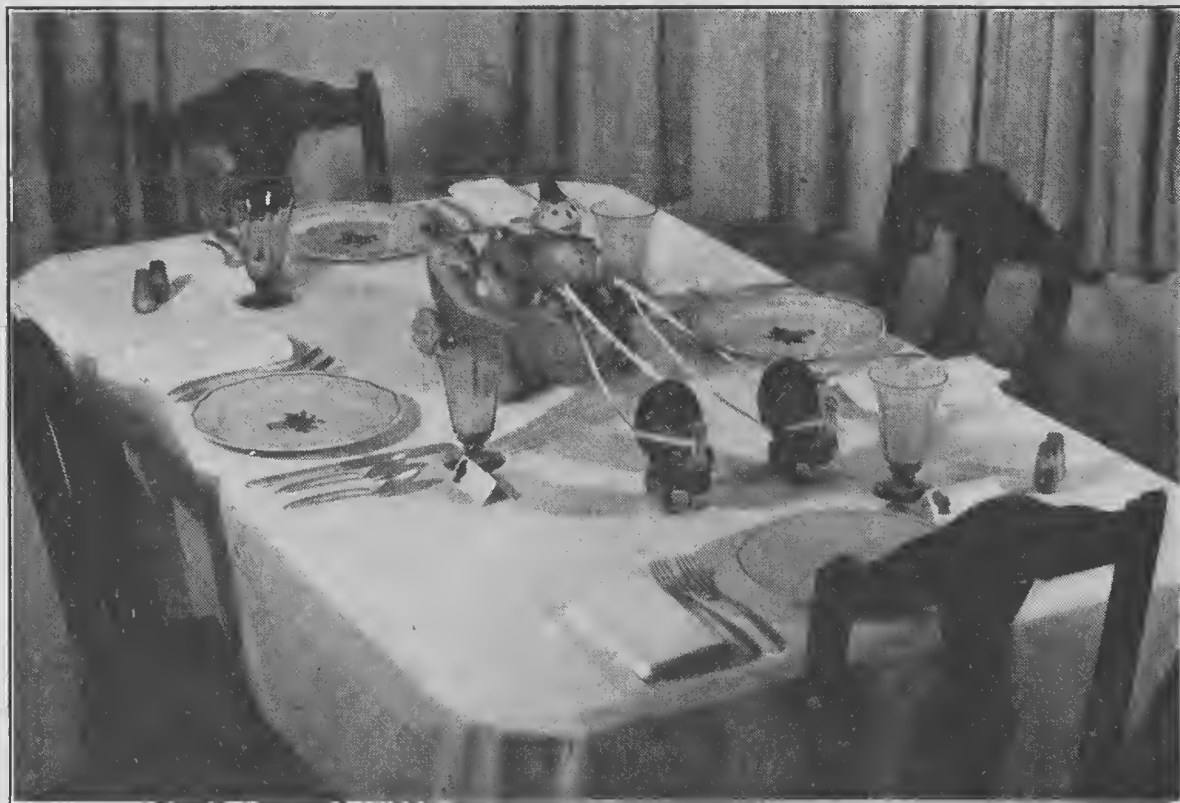
Woman On Royal Commission

FOR some time past, Canadian women have been urging that women be appointed to positions of responsibility on various boards and committees dealing with matters of importance to Canadian people as a whole. They would, no doubt, note with interest that a woman, Mrs. Mary P. Sutherland, was named one of three commissioners appointed by the Dominion government recently. The Royal Commission on Prices, which was set up during July, has as its chairman C. A. Curtis, professor of economics at Queen's University and mayor of Kingston, Ontario. The two others are Mrs. Sutherland of Parksville, B.C., and H. C. Bois of Montreal, secretary-manager of Co-operative Federee of Quebec.

The establishment of such a commission was one of the main recommendations of the House of Commons Special Committee on Prices to enquire into the factors entering into the increased cost of living and which sat during the recent session of parliament. The Commission will continue the work of that committee. It is empowered to make enquiry into price increases, factors leading to price and cost increases and increased profit margins. It has been directed to "pay particular regard" to commodities and services in daily use. The Commission will report from time to time as may seem advisable and will prepare a report which will likely be ready early next year or at least not later than the next session of parliament.

MARY SUTHERLAND is well known to many people in the three prairie provinces and to many in eastern Canada. She was an associate editor of The Country Guide from 1917 to 1920, when she left to become assistant secretary to the Canadian Council of Agriculture. She was born at Oak Lake, Manitoba, where her father, Joseph McCallum, settled in 1882, coming from Ontario, where he engaged in farming and milling.

Mary P. McCallum received her grade and high school education in her native province and later taught in country schools in Manitoba and Saskatchewan. While teaching in Saskatoon she was active in the Equal Franchise League and served as secretary of that organization. Later she joined the staff of the Regina Post as women's editor, a position she gave up when she joined The Country Guide—then The Grain Growers' Guide. Her interest in economic and political subjects attracted her towards the educational work of the Canadian Council of Agriculture and she played a leading part in preparing bulletins and materials for public speaking. In 1923 she married Dr. T. W. Sutherland and they made their home at Shellbrook, Sask. She is the mother of three; her elder daughter, Josephine, a graduate in Arts from Queen's University, is in charge of educational work at the American Air Force Base at Goose Bay, Labrador;



An attractive Thanksgiving table centre made of a half-squash wagon drawn by papier-mache turkeys, and filled with small products from the garden, including the driver.

Care of Metal Articles



To keep those precious silver things at their best, those useful utensils bright and shining, use only approved methods and materials.

by MARION R. McKEE

from which you may pick, and all do a good job. The polish is applied with a soft, clean cloth on the smooth surfaces, and with a sponge or soft cloth on the engraved or chased surfaces. Allow the polish to dry, then rub the surface with a soft, non-scratching cloth or an old, soft, bristled brush following the lines which the manufacturer has already established. Flatware is rubbed lengthwise, hollowware in horizontal circles around, and trays lengthwise. By rubbing silver in this way the lustre will be even. When the polish has been removed wash the article again in hot, soapy water, rinse thoroughly, and dry before storing.

THERE is also another way to clean silver which is effective and much easier than the polishing method, but which robs the silver somewhat of that fine, softening effect which gives it an attractive sheen. This is called the electrolysis method and is done by the chemical action of two metals.

Into an agate-ware or enamelware pan which is not chipped to expose any metal, place boiling water and baking or washing soda in the proportion of two tablespoons of soda to a pint of water. Next, place a small strip of aluminum or zinc in the pan, making sure this metal is shiny and new looking with no dull film covering its surface. Any film may be removed from the surface of the strip by using some abrasive powder and a cloth. Place the tarnished silver into the pan, making sure that one piece touches the metal strip and all the rest of the silver pieces touch each other. It is very important that an unbroken contact to the metal strip is made. Leave the silver in this hot solution for a few moments, rinse in hot water, dry and polish with a soft cloth.

This is a very simple way to clean your silver and it may be used on all solid or sterling silver and plated silver which has no worn spots. It is not advised for worn plated ware or gold lined silver because of the presence of the third metal. Another caution is not to use it for oxidized silver, sometimes called "Dutch silver," which has a dulled, grey finish that was never meant to be shiny. The electrolysis method will remove this finish entirely from such pieces.

To prevent tarnish from reappearing on your polished silver, it is necessary to store it in such a way that no sulphur bearing air will touch its surface. A tarnish proof chest which generally comes with a set of flatware is a safe place. Little used pieces of flatware may be left there indefinitely without tarnishing to any degree. Return all your silver pieces to the chest after being washed and dried for safe-keeping. The secret of this tarnish proof chest is simply that the materials from which it is made contain no sulphur and it is airtight.

Any way in which you keep air from the silver is an aid against tarn-

ish. Fine quality flannel cloths specially treated to prevent tarnish may be bought and used to make envelope cases or to wrap silver in for storing. A large cloth of this kind may be used to make an airtight covering for your silver in a separate drawer. Line a drawer with half of the cloth, then lay the silverware on the cloth and fold the remaining cloth over the silver and carefully tuck it in around the edges.

Cellophane wrapping is another airtight method of keeping silverware untarnished. Buy a roll of cellophane, and wrap each article in a generous sized piece of it, turning in the ends and lapping the edges over carefully. Tie any bundles which require it with a piece of string, and you will have a neat appearing parcel protected from the air, and with the added advantage of being able to see at a glance what it contains. Untorn cellophane may be used over and over again. Moisture-proof bags and unbleached paper may be used like the cellophane. Labels should be placed on them to identify their contents.

PEWTER is a soft metal with a good sheen and silver-like color. It is easily scratched. No harsh, abrasive, powders should be used on its surface. Special creams and polishes may be bought to polish this metal and perhaps give the best results. Fine rottenstone and linseed oil mixed to a paste is another method of cleaning pewter, and is very effective. After polishing, wash pewter in hot, soapy suds, rinse thoroughly and dry with a soft cloth. If pewter pieces are really in poor condition, it is best to have a jeweller clean them first for you.

Nickel is another metal which you will find on different household appliances, coffee urns, faucets and elsewhere. It requires only soap and water, thorough rinsing and drying by rubbing with a soft cloth to keep it looking its best. Sometimes very stained nickel may require a nickel polish or a cream of whiting and water to restore the sheen. Chromium plated appliances are treated much like nickel and need only a wiping off with a damp cloth and polishing.

Copper and brass require a similar treatment. Before you clean these metals, remove any outside grease by washing with a soda solution or soap and water. Then clean with lemon juice or vinegar either with or without salt added, then wash again, rinse and dry. You may also buy special cleaners to use on these metals, which will shine them up like new.

Aluminum pots and pans and other household utensils are a pleasure to use because they are so light and easy to handle. Like other metals they require some care. Pans are sometimes discolored by strong soaps and washing powders which contain a certain amount of alkali, or by certain foods

COMPANY coming? If so, out from storage come the treasured items of silver ready to be used for the occasion. By "ready" we mean shiny, gleaming and free from the tarnish which so easily dulls our lovely silver pieces.

Every owner of silver wages a constant war against tarnish. This dull film is caused by sulphur in the air or in the foods eaten with silver flatware. Sulphur is more common around us than we may think. It is in many foods. After eating an egg with a silver fork or spoon it is easy to see a coat of tarnish on the silver. This is because eggs have quite a lot of sulphur in them. It is in the air, especially in wintertime from the coal burned in the cook stove and furnace. Thus you are apt to have more tarnish on your silverware in winter than in summer.

Some fastidious homemakers have made the mistake of wrapping silver in flannel or white tissue paper, and then neatly holding the bundle together with a rubber band. Sulphur is used to bleach color from paper. Result—tarnish. Rubber is an outstanding enemy of silver due to the sulphur it contains, and should always be kept at a safe distance. Rubber mats on the drainboard tarnish silver. Pencils with rubber erasers left in the silver drawer or chest invite a good coat of tarnish. It is a good policy to keep silver and rubber a safe distance apart.

Another enemy of silver is salt. It etches out little holes in the surface of the silver, and these are difficult and sometimes impossible to remove. Keeping salt shakers away from other silver

pieces, dusting all salt from plates which have held salted crackers or nuts, and other precautions where salt and silver may come together will prevent this trouble.

One of the best ways to take care of silver is to use it, and use it often. It is the stuff heirlooms are made of and lasts more than a lifetime. Actually, silver becomes more beautiful with use and acquires a soft lustre and character of its own from the many fine rubbings which soften the sheen of its surface.

Washing silver is an art and should be done with care. Use plenty of hot, soapy water. The pieces should be washed separately if they are fairly large, or in the case of flatware wash only a few pieces at a time. This is to avoid those scratches which will injure the surface should one piece rub against the other. After a generous soaping, thoroughly rinse your silver in plenty of hot, clear water, and dry with a clean, soft cloth. Silver which has been dried without being rinsed will tarnish faster and have less sheen. Thorough drying is important, too, for little drops of moisture hasten tarnish. Even the moisture from your hands will tarnish silver, so some homemakers wear cotton gloves when handling pieces to be put away. After each washing devote a minute or two to going over the surface with a special polishing cloth to keep it bright and shiny. These special polishing cloths may be purchased at most department stores.

Choosing a silver polish is a matter of preference. There is a wide variety of cakes, powders, liquids, and pastes

which are cooked in them. These stains, while harmless, are not a thing of beauty and are often removed by boiling grapefruit, rhubarb or lemon skins in the pans. Soda or any alkaline substance is harmful to aluminum, causing it to have pit marks.

Fat sometimes spills over the sides of aluminum pans and accumulates there in a film which is very hard to remove. Cleaning the pan of any spilt fat as soon as it is possible will help prevent this. Aluminum responds better to harsh treatment than most metals, and a pad of steel wool, copper ribbon sponge or other scouring pads, along with soap generally will remove most stains and keep the metal shiny.

Because aluminum sometimes stains easily it is wise to fill the pans to be soaked, before washing, right up to the brim. This will prevent any of these dark water marks and stains which develop at the water level of a partly filled pan.

IF you have a well "seasoned" iron frying pan in your possession, you have a treasure. This utensil is already worn smooth with many usings, and the small pores in the metal are filled with fat giving perfect frying results with little sticking. If you have a new, unused cast iron frying pan it should be given a little attention to achieve the best results from its use. Rub some unsalted oil or fat all over the inside of the pan, rubbing it in well. Let it stand aside for a few days or bake in a very low oven for an hour or so. Next, wash it in hot, soapy water with some washing soda added, and rub it briskly with steel wool or an abrasive. Dry it thoroughly and rub with a little fat or oil if it is not to be used for some time. This, of course, must be washed off before the pan is used. Even if you dry the iron frying pan with care, it sometimes will have a little rust spot on its surface. This moisture may come from the air. An abrasive powder or steel wool will easily remove these rust marks. The pan should be rinsed off before using.

Tin is another household metal which is commonly found in cake, bread and other pans. Tin gives its best service when it loses its shine and the surface becomes dull. This is because heat is more readily absorbed by the dull surface and cooking is more even. A little fat also seeps into the tin after many usings, and this prevents sticking.

You may have had a stainless steel sink installed recently in your home. This metal, as its name implies, is stainless and requires only a wiping with a damp cloth to keep it at its shiny best.

Monometal sinks, table and cabinet tops have also come into general use. They are less expensive than stainless steel, but require more care. When new, they stain quite readily and require a fine abrasive powder to remain shiny and clean. After the sink receives a number of these treatments, it generally remains clean for longer periods of time, and stains less.

Bronze articles such as candlesticks and vases may be kept bright and free of tarnish this easy way. Wash them in warm, soapy water and follow by rubbing with denatured alcohol to remove grease and soap. Then apply a coat of transparent lacquer which is available at any paint store.

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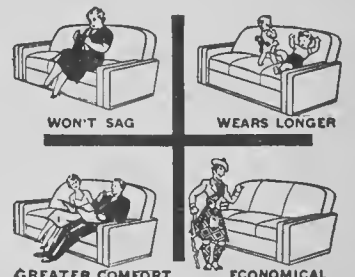


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Tomatoes In Season

A great favorite among the vegetables for flavor and color can be used in many ways

by RUTH MEREDITH



Serve baked stuffed tomatoes for variety and flavor at mealtime.

FOR rich full flavor it is hard to beat the luscious sun-ripened tomato, fresh from our own gardens. A great favorite among Canadians, the tomato is used in many, many ways.

As a salad ingredient it ranks at the top, and blends in with the blander greens and other vegetables. Recipes calling for tomatoes are so numerous it would be impossible to collect them all. Cold tomato juice is an ideal start for a breakfast, or when spiced up a bit makes a fitting appetizer before dinner. Tomato catsup is one of the staples in our pantries and is always ready to lend flavor to meats and other foods. Tomato soup is practically a must for our food shelf as well, for not only is it used as a soup, but undiluted and seasoned it becomes a delicious sauce for meat loaves, hamburgers, macaroni, rice and other dishes.

Tomatoes are also one of the easiest vegetables to can due to the natural acid which they contain. The boiling water bath method is a simple, effective way and one which preserves the flavor and color of the tomatoes.

Stuffed Baked Tomatoes

- | | |
|----------------------------|----------------------------|
| 6 medium tomatoes | 1 c. ground ham |
| 1 tsp. salt | 2 T. diced green pepper |
| $\frac{1}{8}$ tsp. pepper | 1 T. diced onion |
| 1 c. dry bread crumbs | 3 T. buttered bread crumbs |
| 1 hard cooked egg, chopped | |

Wash tomatoes; cut a thin slice from stem end and scoop out pulp. Sprinkle inside of each tomato with some of the salt and pepper. Mix remainder of salt and pepper with all other ingredients, except buttered bread crumbs. Fill tomatoes with mixture, heaping it at the top of each tomato. Sprinkle some of the buttered crumbs on top of each tomato. Place tomatoes in a well greased round cake dish. Bake in a moderately hot oven (400 degrees Fahr.) for 25 minutes.

Tomato Rarebit

- | | |
|----------------------------------|--------------------|
| 2 T. butter | 2 c. grated cheese |
| 2 T. flour | 1 egg |
| $\frac{3}{4}$ c. milk | salt |
| $\frac{3}{4}$ c. stewed tomatoes | mustard |
| $\frac{1}{8}$ tsp. soda | pepper |

Melt the butter. Stir in the flour until smooth. Stir in the milk and cook, stirring constantly, until thick. Strain the tomatoes, stir in the soda, and as soon as it has finished frothing, stir into the sauce. Add the slightly beaten egg. Cook one minute, then add the grated cheese and pour over toast. Serve at once.

Tomato And Egg

Cut a slice from the top of a tomato. Remove the centre. Break an egg into the cavity. Bake in a moderate oven until the egg is cooked. Serve hot.

Fried Green Tomatoes

Slice fairly large unripe tomatoes in half-inch slices crosswise. Do not peel. Dip in egg, then in bread crumbs, and saute in butter until nicely browned. Sprinkle with salt and pepper. Serve.

Mexican Tomato Rice

- | | |
|------------------------------|-------------------------|
| 2 c. cooked rice | 1 shredded green pepper |
| 1 T. bacon fat or butter | 1 c. tomatoes |
| 1 small onion, finely sliced | |

Melt bacon fat or butter. Add peppers and onions. Stir until cooked and slightly browned. Add rice. Continue stirring until rice is brown. Add tomatoes and one-half teaspoon of salt. Cook 15 minutes. Serves six.

Tomato Chowder

- | | |
|----------------------------------|--------------------------------|
| $\frac{1}{2}$ c. diced salt pork | 1 c. diced celery |
| 1 medium minced onion | 2 c. tomatoes, fresh or canned |
| 1 c. diced carrot | 1 qt. thin white sauce |
| 1 c. diced potato | |

Saute the diced pork until it is brown, add all the vegetables except the tomatoes, and saute them until light brown. Cover the mixture with boiling water and cook until the vegetables are tender. Add the salt, paprika, and white sauce. Heat the tomatoes, combine the two mixtures, and serve at once. The recipe makes approximately nine cups.

Corn And Tomato Casserole

- | | |
|-------------------------------|---------------------------|
| 2 c. corn, cut from the cob | 1 tsp. onion juice |
| 2 c. strained cooked tomatoes | 2 eggs |
| 3 slices of bread | $\frac{1}{4}$ tsp. salt |
| | 1 T. butter |
| | $\frac{1}{4}$ c. molasses |
| | $\frac{1}{8}$ tsp. pepper |

Butter the slices of bread, then spread with the molasses. Cut bread into cubes and arrange in the bottom of a buttered casserole. Beat the eggs, then add tomatoes, corn, and seasonings. Pour this mixture over the bread cubes, and bake the casserole in a moderate oven (350 degrees Fahr.) for about 30 minutes.

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¾ cup of brown sugar
1/3 cup of butter
Pinch salt

Peel and slice apples into a saucepan, add water and cook until tender, then turn into a buttered pudding dish. Roll Soda Crackers into fine crumbs, place in a mixing bowl, add sugar and butter and salt and blend thoroughly together. Sprinkle mixture over the apples and bake in a hot oven—400°—for 25 minutes. Serve warm with cream.

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Pickle Favorites

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NOW that September is here the spicy aroma of pickle making once again fills the kitchen.

Out of the garden and into the pickle jars go countless varieties of vegetables and fruits, storing up tangy flavor to accent winter meals.

To insure success with your pickles it is necessary to use only the best and freshest ingredients. Firm, ripe vegetables and fruits are a "must" for crisp, flavorsome pickles. Ordinary cooking salt bought in bags is recommended instead of the "free-running" variety used for the table. The best quality vinegar, either white or dark variety, fresh spices, non-metal utensils, and soft water all add up to first class pickles.

Sliced Cucumber Pickles

- | | |
|--------------------------|--------------------------------|
| 3 qts. sliced cucumbers | 1 heaping tsp. mustard-seed |
| 4 good sized onions | 1 heaping tsp. whole cloves |
| 1 green pepper, chopped | 1 heaping tsp. turmeric powder |
| ½ c. salt | 1½ c. brown sugar |
| 1 qt. vinegar | |
| 1 c. grated horse-radish | |

Chop onions and green pepper, after removing seeds from the latter; add the sliced cucumber and sprinkle well with the salt, and let stand for three hours and drain. Put vinegar in kettle; add horse radish, mustard-seed, cloves, turmeric powder, and brown sugar. Put chopped vegetables in, mix well, and let come to a boil and seal.

English Celery Sauce

- | | |
|------------------------|--------------------|
| 30 large ripe tomatoes | 6 heads celery |
| 12 onions | 2 lbs. brown sugar |
| 6 small green peppers | 4 T. salt |
| (3 large ones) | 6 c. vinegar |

Remove the seeds from the peppers, and chop peppers with onions and celery. Peel and cut up the tomatoes; put vinegar in saucepan; add sugar and salt and vegetables. Cook all together two hours and put up hot.

Tomato Relish

- | | |
|---------------------|-------------------|
| 6 green tomatoes | 1 qt. vinegar |
| 6 sour apples | 2 c. brown sugar |
| 4 small onions | 2 tsp. salt |
| 2 green peppers | ½ c. whole spices |
| 1 c. seeded raisins | |

After being well washed chop all the ingredients together fine. Into the vinegar put sugar, salt, and the whole spices tied in a little bag, and all the other ingredients. Boil one and one-half hours.

Dill Pickles

- | | |
|---|--------------------|
| ½ lb. salt | 1 c. vinegar |
| 1 bunch dill or 3 lbs. green or brined dill | 2 oz. mixed spices |

Put a layer of dill in the bottom of a crock. Pack in cucumbers until they reach four inches from the top. Add spices tied in a cheesecloth bag and the remainder of the dill. Pour in the vinegar and cover with the brine. Weight cucumbers down with a plate and iron.

Thousand Island Pickles

- | | |
|------------------------------|-------------------------|
| 1 qt. sliced cucumbers | ¼ c. salt |
| 1 large onion, sliced | 1 c. sliced celery |
| 1 large green pepper, sliced | 1 pt. vinegar |
| 1 large red pepper, sliced | 1 T. white mustard seed |
| | 1 c. sugar |
| | 3 pts. water |

Slice the cucumber and onion, add the salt, and cover them with the water. Let this stand for two hours, then drain. Heat the vinegar with the mustard seed and sugar to the boiling point. Add the vegetables and simmer them for three minutes. Seal the pickles in clean, hot jars.

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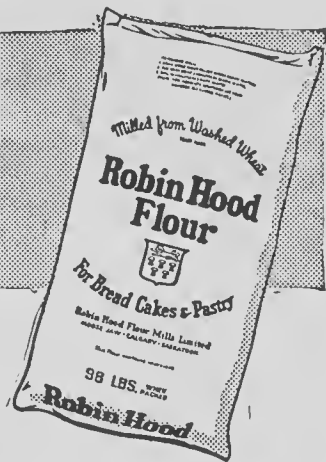
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Wash Them Often

Thrifty ways to make your clothes last longer

by MARGARET M. SPEECHLY

SPEAKING of thrift recalls the ingenious economies of the hardy pioneers. Actually this was not so much a matter of skimping and scraping as of getting full value from everything to the last thread. Such measures made life for the thrifty far better and more satisfying than for the careless and improvident.

Today thrift is just as vital because high prices have forced people to prolong to the limit the service given by fabrics and garments. It is a case of making things do, or going without.

Frequent laundering is a big help in lengthening the life of washable textiles. In the old days when each garment had to be scrubbed laboriously by hand, it mattered a great deal how many articles were in the wash, but today the number is not so important as the degree of soiling.

A washing machine can handle with ease most surface dirt, but once it becomes ingrained, sterner methods have to be used. Rubbing is hard work—hard on you and harder still on the fabric, so it pays to prevent washables from becoming heavily soiled.

Many people regard dirt as something that spoils the look of a garment, but there is more to it than that. When fabrics become saturated with dirt a strain is placed on the yarns of which they are made. The longer the dirt remains in contact with the cloth the greater the wear.

SO it is easy to see the economy of washing textiles before they have a chance to get really dirty. Laundering is simplified, the clothes last longer and best of all perhaps, it cuts down the mending. Few people who have all the work of the home to do, really look forward to turning collars and cuffs, or patching the knees and seats of work clothes.

A larger number of articles in the wash is no hardship with a power washer, but maybe you dread the ironing. The trick is to go in for fabrics that need little or no pressing. Knitwear for the whole family can be folded immediately it is taken from the line. Seersucker and crepe-wear for dresses and pyjamas can be smoothed with the hands or given a flick of the iron. Play clothes of cotton or wool jersey, and corduroy overalls need no pressing if hung to dry smoothly.

For things that must be ironed, choose simple styles or patterns. You may have a weakness for ruffles and fancy things, but they do take a lot of time. Aprons save wear and tear on house dresses and the ironing can be easy if the style is simple.

Once is enough for the men to wear their best shirts, if you are anxious to cut down the wear on collars and cuffs. Treat these areas with melted soap solution before putting them in the washer. For stubborn streaks add a teaspoon of household ammonia to the solution.

Collars do not get so dirty if the back of the neck is neatly trimmed with the barber's clippers. Oil from

the hair soon collects dust and when mixed with perspiration it forms a grimy streak. Unclipped necks and whiskery chins definitely are hard on shirt collars.

When buying men's shirts, be sure to get the correct sleeve length so that the cuffs will not show below the coat sleeve. If too long they get much dirtier and require extra rubbing. If you cannot get the right length, it is worth while to put a tuck just above the elbow.

Light colors for men's best shirts such as blue, green or grey, plain or with stripes, are not only good style but are much easier to launder than pure white. If your family does a lot of visiting, or if the boys are courting this means quite a saving of work.

In your thrift program do not forget foundation garments. Ingrained dirt definitely limits their usefulness. Many that are light in weight with no boning can be done with other pieces of fine underwear. Do not put them through the wringer on account of the garters.

Garments with boning should be done by themselves in a tub. Make up a soap solution with at least two tablespoons of mild flakes to each gallon of lukewarm water. Use enough to completely cover the article. Let it stand in this for about five minutes.

With a plunger or your hands squeeze the suds through and through for about five minutes. Then lift out the garment and press it against the side of the tub to remove surplus suds. Lay it on the table in a good light and if there are any streaks remaining, apply more soap solution with a soft brush, giving special attention to shoulder straps and hose supporters. These are easier to manage if turned back over the garment.

RETURN it to the tub and use the plunger for another five minutes. Squeeze to remove suds, and give three rinses in clear water of the same temperature. Press out as much water as possible against the side of the tub. Never wring or twist. Wrap the garment in bath towels and roll tightly to absorb the moisture.

Hang the garment to dry inside, at ordinary room temperature, never in the direct sunshine or over a register, as extreme heat is bad for rubber. If it is an all-in-one garment, slip the straps over a dress hanger. Run a cord through the garter links of girdles and hang by the cord. Never use clothes pins.

Always hang foundation garments lengthwise and not crosswise as some of them have a tendency to widen. Smooth with your fingers the straps, edges and garters and you will not need to bother about pressing. In fact, never let an iron touch the rubber sections.

Don't forget to wash your dress-shields regularly. Squeeze them in neutral suds of lukewarm temperature, rinse well, roll in a towel and finish drying flat on a table. Smooth them with your fingers, never with an iron. By thrift of this nature you can do a lot to reduce living costs.

Beauty Exchange

Friends can help each other in exchanging treatments and discussing appearance points

by LORETTA MILLER

SEND out a call for your most trusted friend! Direct her willing hands in giving you a face and scalp massage with a professional touch! Then turn about and offer your hands as she directs them beauty-wise. Simple steps in every girl's everyday beauty schedule can combine relaxation, a pleasant time and improved good looks.

You're to be on the receiving end today as you direct your friend in the way of face and scalp massage. Get out everything you will need; hair brush, comb, plenty of tissues, skin lotion, astringent, a basin of hot water, perhaps some ice, and whatever creams you generally use. If you are not in the habit of using creams, you will find any baby oil or any type of greasy cream fine for today's purpose. You're to have a restful facial massage. It will do you a world of good just to sit back and close your eyes. Let your friend read and follow these directions as you relax.

Prepare a chair so that you can sit with your head resting back on a pillow. Or, if you find it easier, lie down with your head resting on a pillow, and with the couch pulled out so that the operator can work at the end or head of the couch. Draw your hair straight back and secure it under a towel. Have a towel spread over your chest, bib-fashion, too.

A Facial Massage

A liberal application of cream or oil is made to the face and throat and this is worked gently upward and outward over the skin. Then every trace of the cleansing agent is removed with tissues. Another application of cream or oil is then made and this is used as a lubricant.

Beginning low on the throat, the fingers are then moved smoothly and gently upward over the throat, along the outer regions of the cheeks up to the hairline. The next movement starts low, beside the previous one, and moves upward just in front of the last one. Continue in this way until the entire face and throat have been massaged. All massage movements must move smoothly and gently if they are to prove restful and soothing.

The rotary or circular movement is used around the eyes and the touch must be very gentle. Scarcely touch the skin with the cushions of the fingers as you slide them smoothly around the eyes. Beginning at the temples, the fingers move under the brows. Press the fingers ever so lightly over the temples, pausing just long enough to make this break in the movement felt. Circle each eye in this manner about 50 times. It is most restful when both hands are used simultaneously so that both eye-areas



Arlene Dahl, M-G-M. star uses flattering hair-do and just-right makeup.

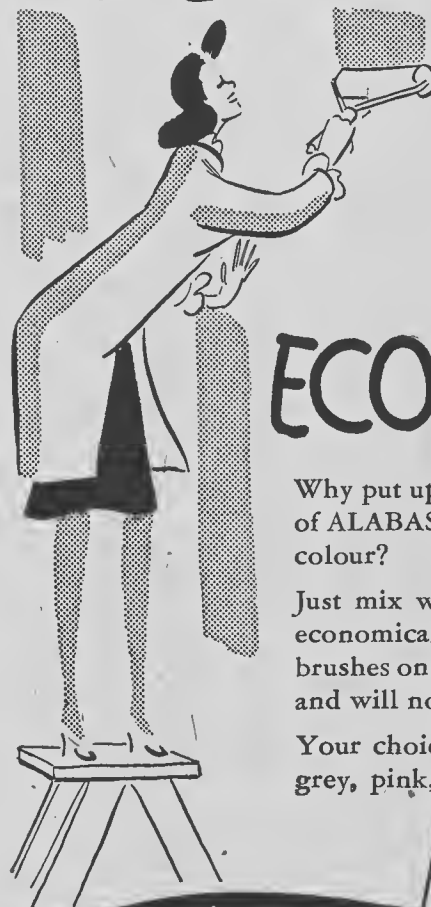
are massaged at the same time. Finally all cream is removed from the skin and a washcloth wrung out in hot water is placed lightly over closed lids. This warm compress remains on during the next step.

The skin should be well covered with cream or oil before proceeding with the massage so that the fingers will slide smoothly and evenly. Both hands are used in the forehead massage. First, the tips of the fingers of both hands are, placed side by side, and the fingers of the right hand slide upward while those of the left slide downward. These short strokes run from the eyebrows to the hairline and move back and forth across the forehead from temple to temple. The forehead is gone over several times. A slight pressure over the temples before beginning each "trip" back across the forehead gives the massage a professional touch. The warm compress is then removed from the eyes as the next step of the facial is given.

This is one of the most important regions to be massaged and care should be given that all the movements are upward. Correct upward movements tend to lift the face while any downward pressure is likely to have a weakening effect on the muscles and encourage lines. The circular movement around the mouth begins at the point of the chin. Both hands are used, and the cushions of the fingers move out to the corners of the lips then up to the tip of the nose. Then the fingers are carried lightly over the skin and the movement again starts at the point of the chin and slides smoothly upward. This same circular movement is repeated fifty times.

When the massage is completed, every trace of cream or oil must be removed from the skin. It may be advisable to use a washcloth wrung out in soapy water in order to remove all of the cream. Then moisten a large

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pad of cotton with skin lotion, tonic or astringent and pat it briskly upward and outward from chin to brow. Or, if you wish, have an ice rub. A small piece of ice, the size of an egg, should be wrapped in a soft cloth and rubbed lightly over the nose, around the mouth and eyes and along the facial contour and chin. The ice massage may continue for two or three minutes. Then pat the skin dry and the facial is complete.

Hair and Scalp Treatment

Brushing the hair requires plenty of elbow grease if it is to be beneficial. The brush should be whisked from the top of the head down to the hair ends and the bristles of the brush should touch the scalp ever so lightly. Then the hair should be brushed upward. Then sideways. Finally, brush the hair straight down.

Massaging the nape of the neck, shoulders and scalp is one of the most restful of all beauty treatments . . . when applied by another person. Stepped up circulation is the basis of every successful scalp massage and because circulation begins below the chin, it is necessary to start the massage over the shoulders.

The operator's left hand is placed at the top of the head while the right hand does the massaging. The cushions

of the fingers are pressed firmly against the shoulder, then rotated so that the skin moves with the action of the fingers. The fingers do not slide over the skin! They are pressed firmly and rotated in small circles. Then the fingers are lifted, moved an inch or two and the same pressure and rotary motion is repeated. The fingers gradually move from the outer tips of the shoulders in toward the nape of the neck. Then the action begins at the nape of the neck and moves upward over the back of the head. Each area is gone over several times. (The number of times this is repeated depends upon the operator.) Of course the massage may be given with either hand while the other hand is placed on top of the head, over the forehead or at the back of the head, depending upon where the massage is being applied.

The scalp massage movements begin at the hairline and move up to the very centre top of the head. The area in back of the ears, over the temples and from forehead to the centre top of the head should be given a firm massage. The same pressure is used on the scalp as on the shoulders. The scalp moves with the action of the fingers. The fingers do not slide over the scalp. A light, superficial brushing completes the scalp and hair treatment.

Buying A New Toaster

Points to keep in mind when
purchasing an electric toaster.

by RUTH JOHNSTON

NOW that the stores are displaying a variety of shiny, new toasters once again, many homemakers will be planning to replace those of ancient or war-time vintage. But what kind will it be? A streamlined, fully automatic pop-up type, the fancy one with the snap-on crumb tray, or the little bargain number advertised for \$3.50? Naturally, price will influence your decision, but often it is difficult to pick the best value in a price range varying from \$3.00 to \$20.00. So, when you go shopping for a new toaster, here are some simple questions to keep in mind.

Will it make good toast? An actual demonstration is the only sure way to answer this question, but this is not always possible or convenient. However, a well-known manufacturer's name is generally sufficient assurance that it is a quality toaster. Many homemakers are only too familiar with the toasters manufactured during war-time which were of hit and miss quality and which bore strange trade names. Too often these toasters blackened the bread in even strips rather than browning it evenly as desired. Or, in other cases it would dry rather than toast the bread, while still others overheated so badly that frequent shut-offs were necessary to prevent scorching. But if the toaster is manufactured by a well-known, reputable firm, you are usually assured of a good performance at the breakfast table.

Is it simple to operate? We have all seen cartoons showing a frustrated male trying in vain to catch the bread as it leaps from his pop-up

toaster. Complicated gadgets are neither desirable nor necessary. Watch for time and temper savers such as heatproof handles, sturdy electric cords (preferably permanently attached at one end to the toaster), a regulating switch, and easily operated moving parts, such as drop sides. Special features like heat selectors and automatic shut-offs will be included only in the higher priced models.

Can it be kept clean? We usually take it for granted that of course that shiny, new toaster will stay that way with moderate care. But all kinds of toasters are manufactured with needless nooks, crannies and seams that make ideal breeding places for germs or even insects. And what provision is made for removal of the inevitable crumbs after each use? Hinged or snap-on crumb trays are wonderful aids in keeping your toaster fresh, clean and crumbless. Other models are made with sufficient space between the floor of the toaster and the element so that crumbs may be brushed out after each use. Beware of the fancy models with the completely enclosed elements and no crumb trays. Inverting the toaster and shaking it is hard on the element as well as the housewife!

Is it guaranteed? Generally speaking, some sort of guarantee is included. Read it before purchasing your toaster so that you will be sure just what it covers and for what period of time. Some are for the element only, others cover the element, finish and automatic features. Inexpensive ones often have no guarantee at all.

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Ex-Lax is effective, all right—but effective in a gentle way. It won't weaken or upset the children. It won't make them feel bad afterwards.

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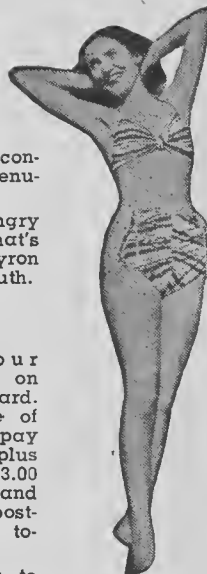
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Just send us your name and address on a letter or postcard. When your package of KYRON arrives, pay the Postman \$3.00 plus postage or send \$3.00 with your order, and we will pay the postage. Send for yours today!

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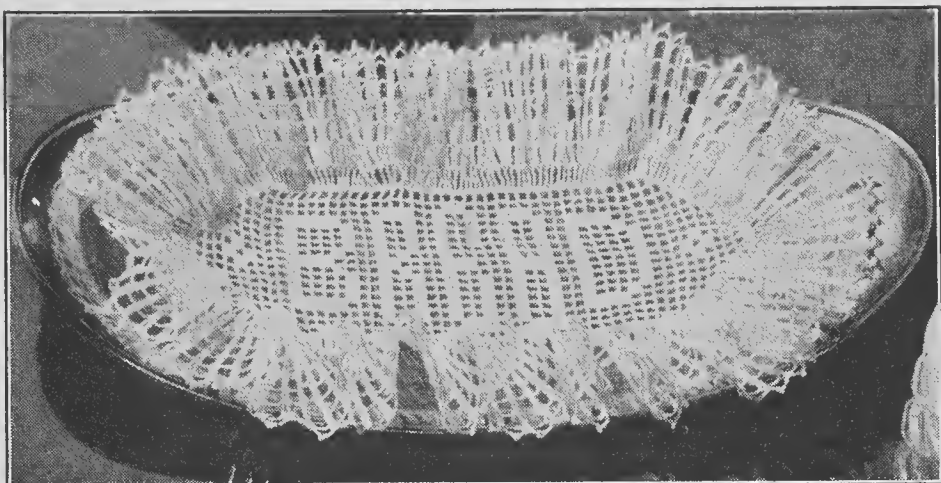
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Bread Tray Cover

Directions to make frothy cover for a tray.

by ANNA DE BELLE



Design No. C-339.

You've seen these lovely frothy covers for bread trays and now you can own one. Crochet it in no time at all, starch it stiff (or stiffen it with boiled sugar syrup) and tuck your rolls or bread slices in the middle. A particularly nice shower or bazaar suggestion. Pattern No. C-339, price 20 cents. Address orders to The Needlework Dept., THE COUNTRY GUIDE, Winnipeg, Man.

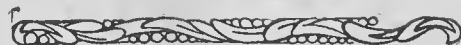


Knitting For Your Man

Three different popular socks and two sweaters.

by ANNA DE BELLE

Men, generally speaking, aren't interested in knitting stories but we think your man will give you his undivided attention if you show him this one. We have included three different sock designs, a sleeveless diamond pullover and a plain cardigan to wear with it. The two sweaters are included in one pattern, No. K-128, price 20 cents and includes sizes 36, 38, and 40. The Argyle socks and the all-over cable socks are also in one pattern, No. K-131, price 20 cents. The two-tone cable socks are another pattern, No. K-116, price 20 cents. If you wish any two of the patterns send only 35 cents. If you wish all three send 50 cents. Address orders to The Needlework Dept., THE COUNTRY GUIDE, Winnipeg, Man. Sweater No. K-128; Argyle and Plain Cable Socks No. K-131; Two-tone Cable Socks No. K-116.



Of Interest To Needlewomen
THE Country Guide Good Ideas Needlework Bulletin for September is just off the press. It contains complete instructions for making one needlework design, information about stitches, needlework ideas and patterns available through The Country Guide.

One copy of the bulletin, free of

charge, is included with each order for stamped needlework or needlework patterns. Single copies of the bulletin are only 5 cents, with one cent added for postage or 6 cents. For 50 cents you may have one bulletin mailed each month for a year. Address orders for bulletins or needlework to The Country Guide Needlework Dept., Winnipeg, Man.

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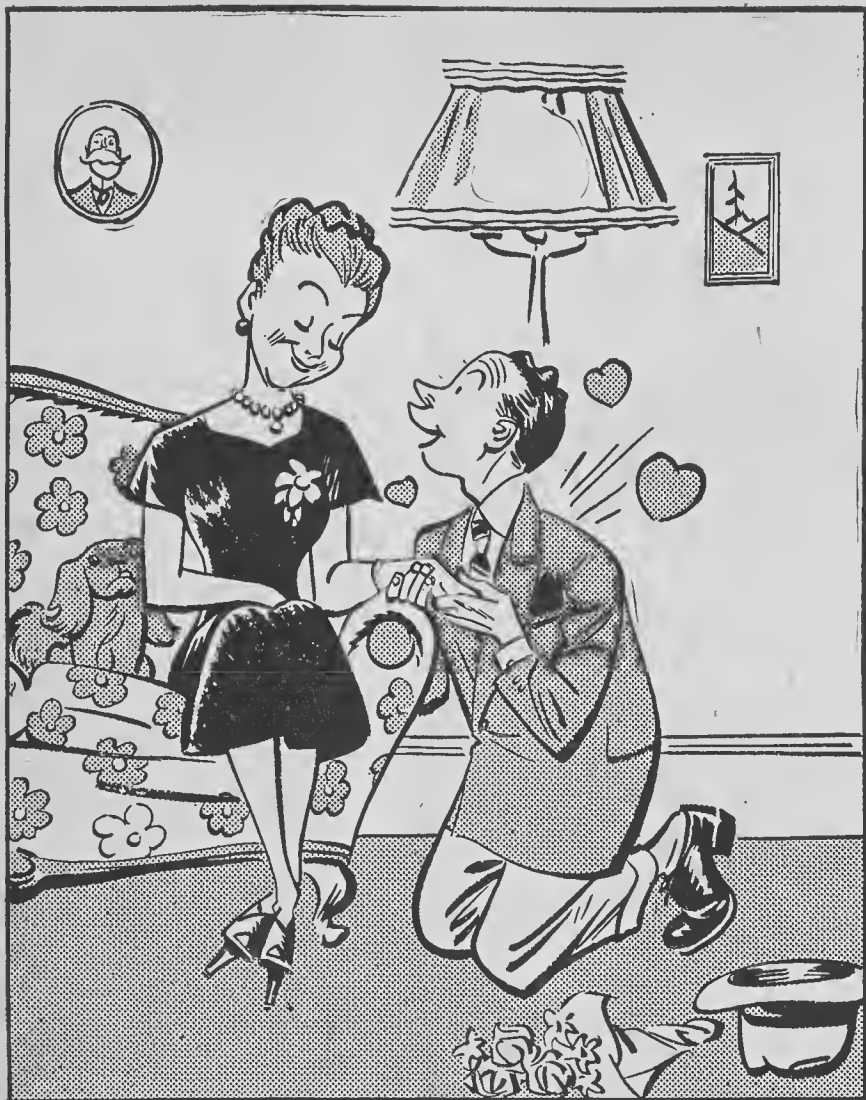


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"Oh George—you're wonderful! I'll just open a package of malty-rich, honey-golden Post's Grape-Nuts Flakes, and quick-like breakfast will be ready!"

"Um-m-m—that one-and-only, out-of-this-world Post's Grape-Nuts Flakes flavor!"

"And good nourishment, too, don't forget."

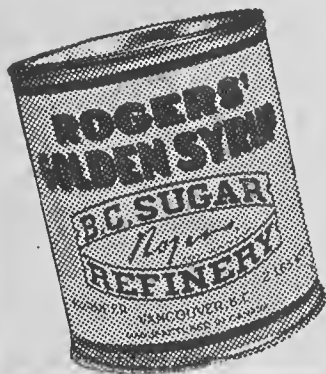
"Yep, Hon—they're jam-packed with carbohydrates, minerals and other food essentials that sure will make your husband a husky guy!"

"And of course I was only kidding about not being able to cook. I can make scrumptious cookies, cakes and other good things from those tested recipes on the Post's Grape-Nuts Flakes packages."

"How about picking up some crisp, crunchy Post's Grape-Nuts Flakes on our way down to get the marriage license?"



How's about an old fashioned taffy pull? Children love the rich, full flavor of Rogers' Golden Syrup . . . and it's nutritious, too. Housewives delight in its variety of uses for cakes and cookies, on hotcakes or waffles or in candies and frostings.



ROGERS' GOLDEN SYRUP

15

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September Styles



No. 2694—A pretty pleated frock for a little girl. Cut in sizes 6 months, 1, 2, and 3 years. Size 2 requires 1½ yards 35-inch fabric. Applique included.

No. 2478—A dainty little girl's dress which is easy to make and iron. Cut in sizes 1, 2, 3, 4, and 6. Size 4 requires 1½ yards 35-inch fabric; panties require ¾ yard 35-inch fabric.

No. 2242—A pretty housedress. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, 42, 44, 46, and 48 inches bust. Size 36 requires 3 yards 39-inch fabric, 1¼ yards edging.

No. 2294—A different dress with a buttoned-in yoke. Long sleeved version is ideal for fall. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, and 42 inches bust. Size 36 requires 4½ yards 35-inch fabric.

No. 2705—Wrap-around housedress with light, airy comfort. Cut in sizes 14, 16, 18, and 20 years, 36, 38, 40, 42, 44, 46, 48, and 50 inches bust. Size 36 requires 4 yards 35-inch fabric.

No. 2463—A comfortable, classic design. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, 42, 44, and 46 inches bust. Size 36 requires 3¾ yards 39-inch fabric.

No. 2521—A dress-up frock for the new fall print. Cut in sizes 12, 14, 16, 18, and 20 years, 36, 38, 40, 42, 44, and 46 inches bust. Size 36 requires 4 yards 39-inch fabric.

Be sure to state correct size and number of pattern wanted.

Patterns 25 cents each.

Write name and address clearly.

Address orders to The Country Guide Patterns, Winnipeg.

Send 25 cents for the Fall and winter magazine which includes a complete sewing guide. Illustrated in color, it presents many pages of charming pattern designs for all ages and occasions.



Feeding The Public

Our members class as amateurs but efficiency and intake have increased with experience.

by BARBARA VILLY CORMACK

I SUPPOSE there is no more general way of raising money for women's organizations than the ever necessary catering to the inner man. From the casual "Let's put on a tea," or "What about a chicken supper?" to "How about catering for the big banquet?" I don't think there can be a farm woman in existence who hasn't been engaged to some extent at least in this universal extra-curricular activity. "Can you bring cream please, and a few cookies?" "You're down for a couple of chickens, salad, scalloped potatoes and a fruit jelly. That O.K.?" are the usual queries.

We in the Alix U.F.W.A. seem to have been doing quite a lot of this lately, our biggest undertaking over the last few years being serving of food at the annual convention of the Central Alberta Dairy Pool whose original home is here. Since delegates come to this meeting from quite a distance and since the regular restaurants in town could not possibly cope with the crowd we serve a mid-day lunch to approximately 100 persons—a fairly simple meal of meat, scalloped potatoes, beans and pie—and then at supper time we put on the annual banquet at which in past years we have served as many as 350 people. Quite a monumental task for an organization of about 30 women! Apart from the providing, donating and cooking the large amount of food necessary, we buy the meat and donate our own pies, cakes, chickens, vegetables, salads, cream, etc. We also bring in our own china, silver, flowers, linen and table appointments, all of which means quite a good sized job in itself in respect to marking and sorting out. It usually amounts to all of us bringing in most of our available possessions. Those left at home have to make do with a few cracked dishes and rejected cutlery! As one member remarked . . . "Just bring all your house along. It's a good opportunity to clean out your cupboards."

WE have, we hope, acquired a certain degree of efficiency in this job, and perhaps we have learned a few common sense hints which might be of use to other groups. At first we used to have a perfectly terrible time sorting out our belongings at the end of a long, hard day, a procedure which was an unpleasant last straw. Now to avoid confusion we appoint a table captain or boss for each table. It is the responsibility of the captain to arrange for all table cloths, dishes, silverware, servers, dish pan and dish washing equipment for that one table. When the banquet is over those dishes are washed right at that table, and kept separate from the others, and sorting out is much easier. Of course this does not work out 100 per cent efficiently, as there are always tables that have to be set at the last minute, and dishes that get used in the kitchen, etc., but it is definitely an improvement.

In the kitchen we appoint a kitchen

boss who is in charge of everything that goes on there. She appoints others to look after the pouring out of tea and coffee for the individual servers, also the dishing of meat and vegetables, and the cutting and naming of pies.

We make use too of our members who live in town. We have a number of these, bless their hearts, mostly retired farm women, who know our difficulties. They boil large quantities of potatoes for us, among other things. Without their stoves to keep things hot for us, and their refrigerators to keep others cold we should have an infinitely harder task. On that day, we are very thankful for all our friends in town from whom we can borrow the odd dish, can opener or gadget which may have been forgotten.

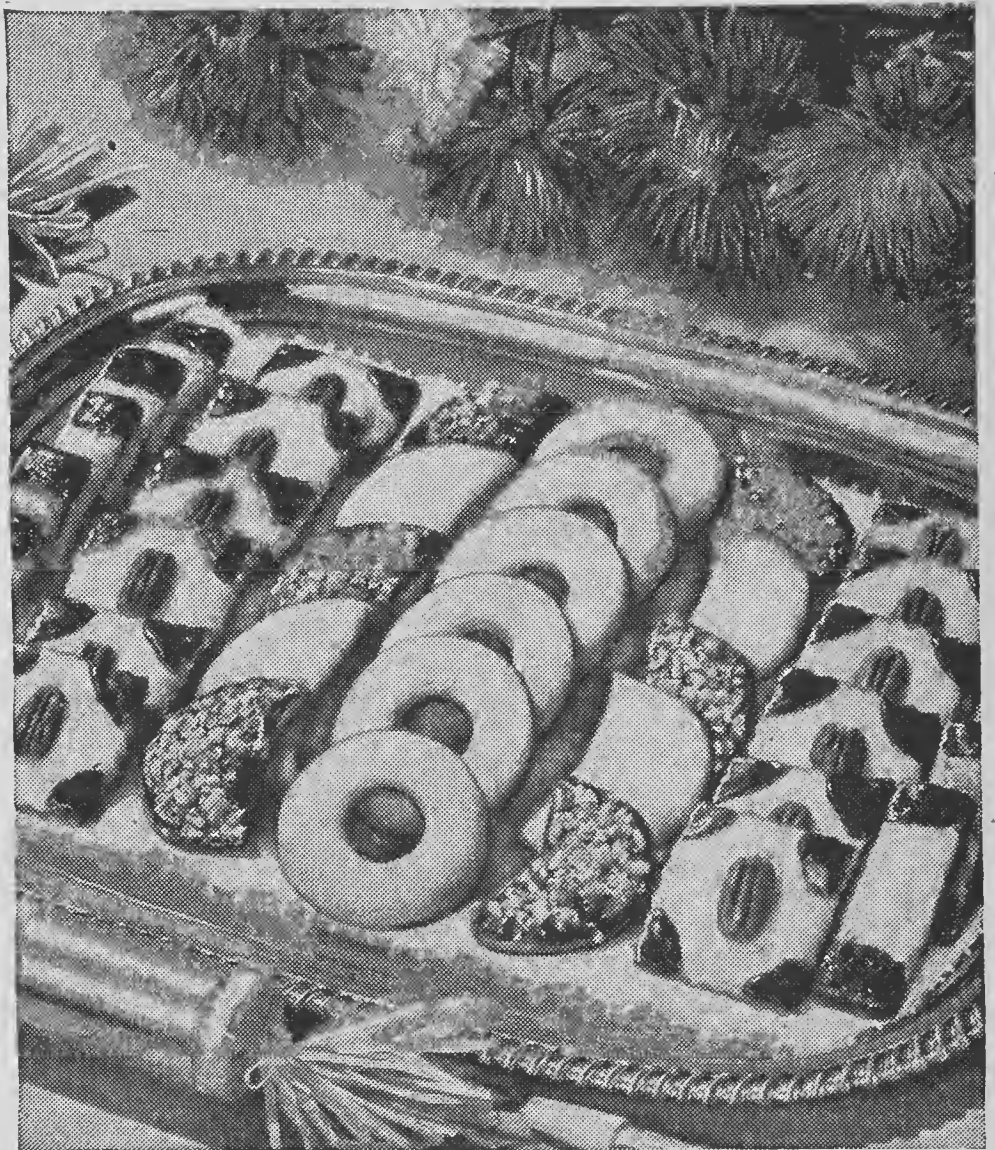
In all we put in a fairly hectic three days, one to get ready, one to go, and one to clear up, but financially it is well worth while, the public is satisfied, and between the rushes we have managed to have a lot of good friendly visiting with one another.

I THINK amateur catering, both small town and rural has improved greatly in the last years, at any rate as far as organization goes. There was never much wrong with the food! I can remember some years ago at the local fair, the eating booth was a very inconvenient affair, with an ancient, smoky stove and no place for storage, and a few hard working souls seemed to be doing all the work. Now in many sports grounds, very much improved booths have gone up, good equipment, shelves beneath the counter for pies, etc. . . . even the help seems to be better arranged. We had a sports day here in July and the committee in charge simply gathered together the names of all available able-bodied women in the district, divided the day and evening into shifts and apportioned the names evenly, with a boss in charge of each shift. Those seeing their names on the list were required to serve, change places with someone, or provide a substitute. It worked very well, and nobody had too much of it.

Catering is always hard work, but it is mostly pleasant, always money-making. After all it is the job that most of us can do best. And the family does not mind either, provided something extra is left for them too.

MANY women's clubs such as church groups, farm and community organizations have had interesting and varied experiences in serving meals in order to make money for some fund. It may have been a dinner, picnic, fair, lawn social or managing a series of teas. The popularity of these events is marked. Perhaps you have discovered some pet way of making them a success. Write a letter, keeping it as short as possible, telling of your experience with feeding the public and what contributed most to its success. Address in care of The Countrywoman, The Country Guide, Winnipeg.

Sweet and Special PARTY TREAT



MAGIC'S Chocolate Cookie Dips are tender, delicious

● Flavor-rich temptations for autumn celebrations—Magic's different and delicious Chocolate Dips are a cookie lover's dream come true!

But be sure to use Magic for the "good-to-eat" flavor, the "good-to-look-at" texture that make the menfolk ask for more. Canada's leading cookery experts recommend it for finer results in all baked dishes. Get Magic today.

CHOCOLATE COOKIE DIPS

1/2 cup shortening	1 1/4 cups sifted all purpose flour
1/2 cup sugar	1/2 teaspoon salt
1 egg	1 1/2 teaspoons Magic Baking Powder
2 tablespoons grated orange rind	2 teaspoons orange juice

Cream shortening and sugar. Add egg; beat. Add orange rind and juice. Sift flour, salt, baking powder; add. Mix. Chill. Roll dough thin; cut according to directions below. Bake in 375°F., oven, 10 min.

Crescent Cookies: Follow above recipe, cut with crescent cutter. Bake. Spread with melted sweet chocolate, sprinkle with finely chopped walnut meats.

Filled Cookies: Follow above recipe, cut with round cutter. Cut smaller round from center of 1/2 the rounds. Bake. Spread plain round with melted sweet chocolate; top with doughnut round.

Coconut Sticks: Follow above recipe, cut in strips 3" by 3/4". Brush with milk; sprinkle with coconut; Bake. Dip ends in melted sweet chocolate.

Pecan Squares: Follow above recipe, cut dough in 2" squares with pastry wheel. Place 1/2 pecan meat in center of each. Bake. Dip corners in melted sweet chocolate;



Don't cover up a poor Complexion!

Practically every woman has some little thing wrong with her skin. If you're ever bothered by tiny blemishes, roughness or dryness—don't try to hide these flaws. Never use cosmetics to cover up a poor complexion. The chances are, you're only making matters worse. . . .



try these 4 simple steps to a lovelier skin!

Softer, smoother, lovelier skin for 4 out of 5 women in carefully supervised tests.

Here is a home beauty treatment that really gets results. Actually brought softer, smoother, lovelier skin to 4 out of 5 women in only two weeks time!

Try it yourself. Follow these 4 simple steps daily for 14 days. Results

will delight you. See for yourself how Noxzema helps heal blemishes, soothes and softens rough, dry skin. You'll soon discover why this famous medicated cream is the favorite of Broadway actresses, professional models, attractive women everywhere. Start Noxzema's 4-step treatment now—see results in just 14 days!

MORNING

1. Bathe face with warm water. Then apply Noxzema to a wet cloth and "cream-wash" your face, massaging gently.

2. Apply light film of Noxzema as a soothing protective powder base to hold make-up perfectly while it also helps heal.

EVENING

3. Repeat morning cleansing with Noxzema on wet cloth. Dry gently.

4. Massage Noxzema lightly into your face, using upward and outward strokes. Pat on extra Noxzema over blemishes.



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Spraying in the orchard of J. C. Malan, Penticton, B.C.

MANY prairie consumers do not appreciate the amount of work which goes into the production of a box of fancy B.C. apples. The above picture, taken some time ago, suggests some of the factors entering into the cost of production. In the first place, the trees, planted on high priced land as a rule, do not come into bearing for several years after planting. Meanwhile, they must be pruned, sprayed if necessary, irrigated and fertilized. When they reach bearing age, heavy crops must be thinned by hand so as to procure a maximum yield of well-colored, uniform fruit. Spraying involves the use of expensive equipment and must be repeated up to seven or eight times during the season, depending on the weather and the prevalence of individual pests and diseases. A single spray may combine several chemicals, or in some cases sprays must be applied separately because the necessary chemicals will not combine in one spray. Sprays and poisons must account if necessary for about 25 insect pests and a similar number of tree fruit diseases.

Fruit Varieties For Northern Districts

The shorter northern seasons greatly restrict the list of adaptable tree fruits

by PERCY H. WRIGHT

A GREAT deal of disappointment is occasioned by gardeners and fruit lovers in the northern parts of the prairie provinces attempting to follow the advice of experimental stations and commercial nurseries located in the southern and longer-season parts. One thing I have surely learned during my 25 years of experience in growing fruits in the prairies area, and that is that every locality is a study by itself, and no one in a different locality can give the advice needed. Even those specialists whose task it is to compare the reports coming in from all areas, fail to give as good advice as men nearer at home. They may be aware in a general way of the different conditions prevailing in other districts but they tend to be most aware of the results secured in the particular spot which is under their observation all the time.

Here in northeastern Saskatchewan the seasons are so much shorter than those in the southern parts of our three provinces that the variety list must be completely revised for our own guidance. Sometimes the varieties chosen for the milder and warmer districts are not hardy enough for the north, and sometimes their fruit does not ripen up before the frosts of autumn.

We find the best examples of the influence of lack of hardiness, in the standard apples and cherry-plums. In my district, experience has revealed that no apple as yet introduced is worth planting out, apart from the value of the experiment, except one variety, Heyer 12, and even it is hardy only on the warmer soils. Similarly, no bush-plum is hardy enough to survive above the snowline over the average winter. However, we can get the same effect as hardiness by choos-

ing varieties which make a prostrate growth and hence are normally covered with snow. Of course, we can aid the chance of snow coverage by planting in a place where drifting will occur, and also by bending down the branches before winter, by placing on them slabs of wood, or other weights. This snow covering is a good idea in any event, for it prevents the rabbits from eating the wood of the bushes. The tree-plums, by great good luck, are not attractive to rabbits after they have become a few years old, but the bush-plums are always delicate fare for these pests.

WHEN we consider the need for early ripening of fruit, we find our greatest examples among the plums and cherries, not among the crabs or apples. The reason is clear. If a crab is not ripened when picked, it will make better jelly than if it is, or, if jelly is not wanted, it will complete its ripening process after being picked. Plums and cherries, on the other hand, must not only be ripened on the tree, but must ripen during warm weather. Here, any variety which is to have taste and quality must be ripe by September 5 to 10, which is about the date that the earliest varieties grown on the open plains ripen when brought up here. One of our best adapted varieties, for instance, is Olsen, a selection made from the wild clumps in the vicinity of Valley River, Man. This plum is favored because it is hardy, on account of its northern nativity, and also because it usually ripens soon enough, though not as soon as Dandy. However, for date of ripening, it is barely able to come under the line. Any plum that, in a southern orchard, ripens after Olsen, is definitely too late for us, and a greater earliness is de-



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sirable. In fact, as much earliness as we can possibly obtain is desirable.

In the cherry-plums, it is the same story. Tom Thumb, an old variety of cherry-plum that is well enough adapted to the winters on account of its low growth, is almost too late in its ripening. Any variety which normally ripens later than Tom Thumb is not adapted. Opata itself ripens up satisfactorily only some years, but would be worth growing if it made a prostrate growth and were easily covered. Dura is an odd combination; it is easily covered, but fails to place on our recommended list on account of its late ripening. The only variety among those which I have yet tried which is definitely promising, is Manor. It has both merits; it is easily covered, and it has never failed to ripen, even in the shortest season our area has ever seen—that of 1945. Among those varieties which occasionally survive the winter above the snowline is the near-sandcherry variety Champa. It is too late for about every other year. If anyone particularly wants a variety which does possess a fair degree of hardiness, and is content with seeing a crop frozen on the bushes about one year in two, the variety Champa is available for him. Champa has at least one other merit—it blooms very late, and seems to be the variety of all varieties most likely to make a set of fruit. In fact, there seems to be evidence that it is self-fertile, surely a rare thing among cherry-plums.

I have not yet tried Heaver cherry-plum, and have tried U-10-10 for too short a time to know much about its adaptations. Both, I believe, have possibilities.

THE short summer of 1945 made a test for many varieties of fruits and trees that we had before thought completely hardy. That year, Dolgo and Robin, two of the varieties in which we previously had most confidence, suffered some injury, and even Rescue lost a few branches. In fact, the only variety which seems able to stand up, alongside the Siberian wild crab, and take anything it can take, is Columbia. That Columbia is not oftener planted is a pity. It is of good size, and the tree combines with its hardiness about the greatest degree of resistance to fire-blight that has yet been noted. Still the variety remains relatively unpopular. The reason is that its fruit ripens after the fruit of Dolgo, Osman, Robin and others commonly grown, and the householder is accustomed to picking it and attempting to use it at the same time as the others. Naturally, being unripe, it is thought to be of inferior quality. If it had been given another two weeks on the tree, cool weather or warm, it would have attained quality.

Personally, I am looking forward to the time when the Nanking-cherry hybrids will be released and popularized. The Nanking cherry is so extraordinarily early in ripening that it cannot fail us, even in our very shortest season, but the fruit is too small to be very popular; and the fruit buds, and sometimes even the tips of the branches, seem to be tender to spring frosts. The hybrids may avoid these handicaps, and yet retain something of the early ripening, heavy yield and good quality of the Nanking parent.

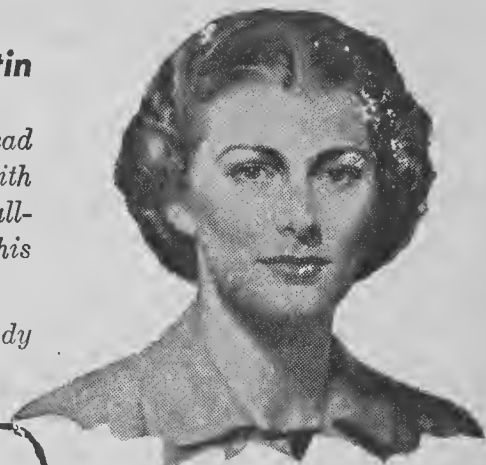
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| or 2 cakes compressed yeast | 6 cups (about) sifted Robin Hood Enriched Flour |
| ½ cup lukewarm water | 2 eggs |
| 1¼ cups milk, scalded | 4 tablespoons melted shortening (cooled somewhat) |
| 3 tablespoons sugar | |

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Here's all you do:

Let yeast stand in lukewarm water for about 5 minutes (if granular yeast is used, add 1 teaspoon sugar).

Place milk in bowl and add sugar and salt; cool to lukewarm.

Add 1 cup of Robin Hood Flour and beat with a rotary beater until smooth.

Beat in the eggs, then add yeast and another cup of flour; beat until well blended, then beat in the melted shortening.

Mix in enough flour to make a soft dough that can be handled.

Place dough on board and let stand covered, for about 5 minutes.

Knead only enough to smooth up dough.

Place in greased bowl, cover and let rise 1 hour in a warm place (85° to 90°).

Punch and let rest, covered, for 5 minutes.

Divide dough in two parts; roll each piece out in a rectangle, being sure to press out all the gas bubbles.

Shape into loaves, place in greased loaf pans and let rise 1 hour.

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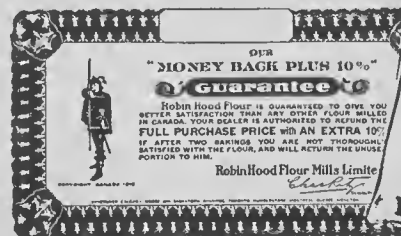
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Sister Kenny's Method

A treatment for infantile paralysis advocated by an Australian nurse who has become a world figure.

by DOROTHY M. HOPKINS

MORE than 30 years ago, Elizabeth Kenny, a nursing sister, worked in an Australian bush area. She served as a visiting nurse, midwife and health counsellor to families living in sparsely settled districts. There she encountered for the first time, cases of poliomyelitis or infantile paralysis. Little was then known either about the cause or the possible cure of this dreaded ailment. She was entirely on her own resources as the nearest medical aid was over 100 miles distant. With no other medical aid available she brought her four first cases to normalcy.

When she returned to Queensland to report to her chief, who was an important figure in one of the city's leading hospitals, she was told that by the treatment she had used, she had violated all accepted rules of the medical profession for treatment of this disease. But Sister Kenny felt that she had made a discovery. She was convinced that the disease as she knew it, needed a different treatment than that being given at the time by the medical profession. So she started on a one-woman crusade for the acceptance of her method.

Except for the interval of the First World War, during which as a war nurse she made 16 round trips on blacked-out ships from Australia to the western front, her life has since been devoted entirely to the furtherance of her method of treatment. She has travelled all over the world and visited many centres giving demonstrations and working in furtherance of her treatment. In 1940 she came to North America.

The Kenny treatment is based not upon the older concept of the symptoms but rather upon a new concept advanced by Sister Kenny herself. This concept has been put to many tests. She believes it is based on well recognized principles of pathology and physiology.

The Kenny method demands an intimate knowledge of muscle anatomy and the neuromuscular system. Much attention is given to detail in muscle re-education. The principles can be learned quickly but the technical practice of the method requires mastery of many details, if satisfactory results are to be obtained. Just who is best qualified to do this is debatable. It seems that graduate nurses and registered physical therapists are the two groups from which most of the workers should come.

TO be most efficient, the treatment must be begun as soon as the case is diagnosed. This means that the treatment should begin in the acute stage. It should be supervised and checked by the physician in charge. The re-education of the disabled muscles can be done only by technicians with the highest skills and abilities. It consists of a series of hot packs or fomentations.

The symptoms of infantile paralysis are described by Miss Kenny as:

1. The muscles affected present a condition of spasm. In fact muscle spasm is the main symptom. It is a series of involuntary contractions that

cannot be released voluntarily. The affected muscles are the muscles in spasm. A muscle in spasm is a muscle attempting to shorten itself. It is tender and there is a hyperirritability.

2. The affected muscles become shortened.

3. Co-ordination is disorganized and inco-ordination seen frequently.

4. The patient frequently loses power in non-affected muscles because affected muscles are pulling the non-affected muscles from their normal resting place and retaining them in this lengthened position because of the unrelaxed spasm.

5. The non-affected muscles frequently refuse to contract due to "mental alienation." Muscles are arranged in antagonistic pairs. It is necessary in order to prevent painful stretching of the muscle in spasm, to inhibit the normal action of its antagonist. Such involuntary inhibition may become lasting. This is the phenomenon termed "mental alienation."

In 1943 the Saskatchewan Department of Public Health sent two public health nurses and a doctor from Saskatoon to the United States to study the Kenny method. In the fall of that year a polio clinic was established in St. Paul's Hospital, Saskatoon. The Saskatchewan Department of Public Health provides special material for packs used in treatment. This twin-plex (munsingwear) is 75 per cent wool. Sometimes old blankets, light in weight, are used. New wool is apt to be irritating to the skin. The middle pack is waterproof material and the outside pack applied is 90 to 100 per cent wool. An electric or hand wringer is essential. The packs are put through the wringer twice so as to prevent any danger of burns from excess moisture.

THE reasons for hot packing are: To release the spasm in the affected muscles; to keep the muscles long and receptive; to keep the muscles in good condition by stimulating circulation; to prevent muscles from shortening and to help lengthen muscles already shortened.

The method of cutting and applying the packs is described fully in "A Guide For Parents in the Nursing Care of Patients with Infantile Paralysis In the Home." This brochure, No. 46A, is published and distributed by the National Foundation for Infantile Paralysis Inc., 120 Broadway, New York 5, N.Y.

In average acute cases, packs are changed every hour and gradually decreased as the patient improves to one and a half to two hours. In more serious cases packs are changed as often as possible. The alternate heating and cooling of the part as accomplished by these hot packs tends to overcome spasm and bring about normal muscle action.

In her travels and demonstrations Sister Kenny has stirred up much interest and controversy. A moving picture has been made telling of her life and her work. At Minneapolis, Minn., the Sister Kenny Foundation has been established to continue education in her method of treatment.

The Country Boy and Girl

Puss In Slippers

by MARY E. GRANNAN

HEATHER threw down her Fairy Tale book, and looked at her cat, Tiger, who was sitting beside her. "Tiger," she said, "do you know something? I don't think much of you. I've just been reading a story in my book, and it tells about a 'Puss in Boots,' and that cat found a princess for his master, and he dispatched an ogre . . . that's what the book says, 'dispatched,' and he did all sorts of things. And what do you do? You just sit in the sun and look at me with your green eyes."

Tiger stretched himself lazily, and said lazily, "I could do all those things too, if I had boots."

Heather jumped to her feet and looked down at her cat. "You could Tiger? You mean you could take me to see princesses and kings and ogres if you had boots?"

"Yioeow," said her cat.

"Well then, I'm going to get you some boots."

"You wear shoes and slippers," said Tiger.

"I've got ski boots," said Heather. "Could you wear my ski boots?"

"No," said the cat. "They're too big. Don't you know that, I often curl up in one of them to sleep? So how could I walk in them. Have you no boots for your dolls? Dolls' boots would fit me."

Heather frowned. "My dolls wear slippers too," she said. "Will slippers do?"

"Oh, they'll do," said Tiger. "But I can't take you to see cats in big stories like 'Puss in boots' if I wear slippers. I can just take you to see cats in little stories like 'Pussy Cat, Pussy Cat, where have you been, I've been to London to see the Queen'."

Heather laughed happily. "Well," she said, "I'd be glad to see those cats in the little stories. I'll get you the slippers." So she dug into her doll's trunk, and she found a pair of blue satin slippers with silver straps. Puss slipped into them, and as he did his whole face changed. He seemed like another cat, as he meowed the words,

"Cats of kitty-land so old,
Send to me your stairs of gold."

And before Heather's eyes, there appeared a golden staircase of a million golden steps. And on every sixth step there sat a cat right out of the nursery rhymes. Hand in hand with Tiger, Heather started her upward way. The first cat she met was Pussy Cat Mole, who in her silk petticoat had burnt a great hole. She was mending the striped petticoat with red silk, that's because the petticoat was red. Heather asked Pussy Cat Mole how she had burnt the hole, and Pussy Cat Mole told her that she'd jumped over a coal that was red hot. Heather then told her how nicely she was mending the burn, and then she went on to the next sixth step, and there sat the cat, who with the old woman rode on a broom with a "bimble bamble bumble." This cat was striped with rainbow colors, and when Heather asked her how that had happened she answered, "There was nothing to eat



rule we know for boys and girls starting back to school this month. Plan your scribbles so that each school subject is kept by itself and can be quickly found when you are asked for it. Paper covers on your new books will keep them fresh and clean for your use. Success or failure in your class may depend on the thought and care you put on "making a good beginning now." As you walk to and from school look around for supplies for winter hobbies and Christmas gifts—pine cones, colored leaves, acorns, rose hips. We will give you ideas of how to use these.

Ann Sankey

up there in the sky . . . so I said to the woman . . . said I, said I, Old woman my dear, I've a plan of my own, with a bimble bamble bumble, so I slid down the rainbow, and left her alone, with hi gee ho gee humble."

Heather laughed. She knew now how the cat had gotten the rainbow stripes. And then she went to the next sixth step, and she saw "The three little kittens who lost their mittens," and on the next sixth step she saw "The cat and the fiddle," and he played her a merry tune. On and on she went, up and up those golden steps, meeting a cat out of the nursery rhymes on every sixth step all the way. When she got to the top, she said to Tiger. "Oh Tiger, I've had a lovely time, but now I'm worried. How do we get home?"

"We slide down the bannisters, of course," said Tiger.

So they mounted the golden rail and slid right back to the garden and the Fairy Tale book. When Heather picked herself up and looked around, Tiger was sound asleep in the blue satin slippers with the silver straps.

Talk Tells What You Are

WHAT you say, and how you say it, tells what you are, even more than your looks. Your talk is your temperament and character indicator. Take slang expressions. They creep in so slyly, unless they are watched, and advertise the fact that you are an easy imitator or that you will follow the crowd even though you lose a bit of your polish.

In certain circumstances, some of the milder slang expressions seem to be more colorful than correct English. "Hi!" is more familiar than plain "Hello!" On occasions "Okay" is more expressive than the flat "Yes, I will." Some of our slang expressions have come down to us from the classics. "Skin of the teeth" is found in the Book of Job, and "Let me tell the world" is from Shakespeare's "Twelfth Night." The safe rule is: Be master of slang expressions, not a slave to them.

If you clip your words too often people will conclude you are inclined to be a trifle lazy. A professor isn't a

FARM boys and girls are out helping to gather in Canada's harvest—picking fruit in orchards, driving tractors or hauling grain from fields, running errands, milking cows or helping to prepare meals for hungry workers. All across Canada boys and girls are on the job for this is the time of year when many of you earn your own pocket money. Every boy and girl likes to have a little money of his own to buy some of his clothes, gifts for his friends or to spend on some hobby or amusement. Money you earn really seems to belong to you.

"Make a good beginning," is the best

rule we know for boys and girls starting back to school this month. Plan your scribbles so that each school subject is kept by itself and can be quickly found when you are asked for it. Paper covers on your new books will keep them fresh and clean for your use. Success or failure in your class may depend on the thought and care you put on "making a good beginning now." As you walk to and from school look around for supplies for winter hobbies and Christmas gifts—pine cones, colored leaves, acorns, rose hips. We will give you ideas of how to use these.

"prof" any more than a photograph is a "fote." Or do you prefer to be taken for a smarty? If so, just keep on using smart expressions and catch phrases, such as "You don't say!" or "You're telling me!" or "Say's you!"

Blanket words need watching. They have been so overworked they have almost lost their original meaning. Take the word "swell." You speak of a swell party, a swell person, and a swell ice-cream soda. What have they in common, really? It's much the same with awfully, sure, cute, terrible, and wonderful. If you overdo such sticky words as these you are not likely to gain much of a reputation as a precise or particular person.

It's a good thing to keep abreast of the times, and to show it in your choice and use of words, as well as in the way you dress.—Walter King.

My Own Book Of Stories

HERE is a story of how a tailor became a king. This tailor was

sitting in his shop stitching a waistcoat, when he felt hungry. He prepared a slice of bread thickly spread with jam and placed it on the table. No sooner had he turned his back than his treat was covered with flies. The tailor picked up a rag and brought it down killing seven flies. At once he began to boast, "What a brave fellow I am, seven at one blow, the world shall hear of this!"

So he made a band on which were printed the words, "SEVEN AT ONE BLOW," and this he tied around his waist. Before the tailor left home he took with him some cheese and a bird which he found caught in the hedge. He then travelled out into the world always following his own nose. As he climbed a hill he met a giant who showed the tailor how strong he was by squeezing water out of a stone (as you see in our picture) but our little tailor took out the cheese and squeezed whey from it. Then the giant threw a stone high into the air so that it almost disappeared but the tailor released his bird and it flew out of sight. Next they began to move a large tree out of the forest. The giant carried the trunk but the tailor just sat on the branches where the giant couldn't see him and rode along. Last of all the giant reached for the tall branches of a cherry tree for the tailor to eat the fruit, but as soon as the giant let go the tailor was tossed over the tree. The tailor cleverly asked the giant to try to jump over the tree but the giant stuck fast in the bush. That night the giant tried to kill the tailor in his bed, but the tailor had slept in a corner and so was saved.

The tailor travelled on to the king's palace where he was asked to join the king's army. The tailor wished to marry the king's daughter. After he had killed two giants, a unicorn and a wild boar to show that he was a brave man, the king was afraid to refuse him.—A. T.



Picture of the giant and the tailor to color.

THE *Country* GUIDE

with which is incorporated

THE NOR'-WEST FARMER and FARM and HOME
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VOL. LXVII WINNIPEG, SEPTEMBER, 1948 No. 9

The Party Conventions

Canadians have been afforded an unusual opportunity to review the political scene through the three national party conventions, two of which have been concluded. The Liberal congress, held on three balmy midsummer days in Ottawa's spacious Coliseum, must be rated as a glittering social success. The gay crowd in holiday humor numbered over 3,000, of which 1,300 were accredited delegates, with a good portion of ladies in the latest summer creations.

As a historic political event it was disappointing. The convention opened on a dull note. The early sessions were devoted to the formulation of a party platform. Delegates soon found that policy making was being done for them by the party hierarchy. An overwhelming proportion of them took it with good grace, probably because they realized that no business could be completed by a crowd of such proportions without considerable manipulation from above. The conference proceeded languidly till the closing afternoon reserved for the election of a new leader. That was different. Here the delegates came into their own. It had the air of a sporting event. Its conclusion was high drama.

The seating arrangements at the auditorium were copied from the political circuses at Philadelphia. A high platform jutting into the front of the auditorium provided reserved seats for about half a hundred of Canada's leading Liberals and a field day for the photographers. In the seat of honor sat Rt. Hon. W. L. Mackenzie King, a bland, immovable Buddha. His lieutenants might leave the stage nearly bare at times, but the leader missed no word or gesture from either the platform or from speakers on the floor.

One had to attend this convention to appreciate the hold that the chief has on the rank and file of the Liberal party. He led them out of defeat into the sunlit places of power. As the party prospered over the years, so has his position within it grown stronger. His cohorts now extend to him a place not outranked by that accorded to the great Sir Wilfred. Throughout the convention the mere mention of the name King provoked a wild burst of applause even for the most uninspired speaker.

The Liberal party under Mr. King's leadership has had a long and creditable reign. It may well be proud of its contribution to Canadian unity and strength. Yet at this convention there was too much posing before the glass of history. There are stern tasks ahead to which the party leaders gave only grudging attention. They seemed only dimly aware of the discontent throughout the land. Their pious resolution on full employment and standards of living was roughly handled by a few bold insurgents, and was nervously withdrawn. It emerged again from the resolutions committee as a recommendation for selective price controls, where necessary, to keep down the cost of living. There was an obvious effort to shield the Minister of Transport from the wrath of Maritime and western delegates. The resolution on freight rates only made its appearance in the dying hours of the policy discussion. None but the principle actors know the plain and fancy sword play required to make the party chiefs agree to a Royal Commission for investigating the Canadian rate structure which the government had formerly refused.

From the party point of view the most disconcerting development was the revolt of youth. Young party members from both east and west scored in the sharpest language the indifference in the prepared resolutions to the facts that are shaping the lives of Canadian citizens today. The rebels pleased the crowd, if one could judge by the widening circle of applause. The convention managers attempted to offset the sporadic outbursts from the floor by selecting four officers from the

national youth organization to voice the necessary assurance from the platform, but it was not a convincing performance. However, the slick machine got into gear again, and completed 21 planks calculated to take the party safely through another election.

Democracy Unlimited

The C.C.F. convention at the Fort Garry Hotel, Winnipeg, provided sharp contrasts. Salubrious weather gave place to oppressive humidity. The Ottawa audience exuded the well dressed assurance of men and women who were interested in preserving something. Winnipeg presented a contentious shirt-sleeves crowd impelled by some terrible urgency.

If the Ottawa convention suffered from too much management, the Winnipeg convention suffered from too little. The Liberals ambled comfortably through 21 resolutions, many of which were unanimously adopted without any debate. Indeed, many of them were too vague and ambiguous to warrant any debate. The C.C.F. delegates were presented with 170 resolutions, several of which were bitterly sweated out clause by clause. On one resolution there were 29 speakers from the floor. At Winnipeg the chairman verbally spanked one provincial leader, a woman delegate curtly reproved the national leader from the floor, and members of the national executive took each other apart from the platform in their zeal for special causes.

Such things would have been impossible in an army commanded by Mr. King. They were only possible at Winnipeg because of the small size of the convention. Delegates were limited to one for each federal constituency. Federal M.P.s were merely visitors without a vote, apart from the handful on the national executive.

This army commanded by privates took up several positions from which it may be difficult to extricate itself without casualties. It declared for a program of socialization which will take in banks, transportation, iron and steel, industries vital to agriculture, fuel and power. It went on to demand control of investments to co-ordinate government investments and the socialized banking system with those of the private insurance, mortgage and trust companies. This ambitious undertaking is to be one of the objectives in the first year the party reaches power! The party leaders, who have some knowledge of political realities, watched this manoeuvre with dismay. It was not youth which rocked the boat at Winnipeg, but hardened doctrinaire socialists.

The C.C.F. leaders also had fears over the resolution supporting E.R.P. Communists, boring from within, have tried, not without some success, to commit the C.C.F. against the Marshall Plan. Strong anti-communists at the convention, outraged by the political conditions which some Americans have sought to attach to E.R.P., threatened to denounce it. Their success would have been a play into the hands of their most hated foe. It was one of the few occasions on which Mr. Coldwell felt it necessary to take part in the debate. His forthright support of Marshall Plan aid undoubtedly helped to sway the vote in its favor.

Some of the weaknesses of the C.C.F. as a national party were apparent in the convention. French-speaking Canada was almost unrepresented. A great deal of work must be done within the party to reconcile urban and rural viewpoints. This was most marked in the oleo debate which threatened to split the convention straight down the middle. With a few notable exceptions, the party has not recruited enough first-class talent from that large section of the public whose interests are neither trade union nor agricultural.

The C.C.F., however, was in green pastures in the debate over price controls. There was a keen awareness that it has consistently maintained one position on this subject since the close of the war; that the hopeful predictions of its opponents have all been confounded; and that the demand for a reimposition of controls and the excess profits tax has spread beyond the confines of its own party membership. This issue, with its gathering momentum, may provide the strength which the party seems to be confident of acquiring.

New Proposal For Oleo

The casual mention of oleo at the Liberal convention produced the same effect as the whisper of plague in a crowded oriental bazaar. By silent consent the challenge was not taken up and the party managers breathed more easily. The principle of oleo exclusion cuts across all Canadian party lines. All of them can produce champions for and against. Neither of the old parties have ventured when in power to do anything about it. Both of them are anxious to avoid any discussion on this most divisive subject on the whole political horizon.

Until the C.C.F. convention it was either a question of maintaining or abandoning the restrictions imposed in 1921. Legislators had to make the difficult choice between the moral right of poorer people to a cheap food, and economic injury to the dairy industry which would have wide repercussions on the whole Canadian economy. The C.C.F. convention passed a resolution which approaches the subject in a new and constructive way. It proposes the formation of regional producer co-operative pools which will control all milk marketed in their respective areas. From this follows the equal payment for all milk of equal grade, regardless of its ultimate use. The co-operative may then direct the use to which all milk would be put. It would promote the maximum consumption of whole milk as that is the most profitable form of sale. It would direct the surplus into those channels which happen for the moment to be the most profitable.

The C.C.F. resolution further favors joint producer-consumer storage co-operatives so that in future the spread between summer and winter prices would accrue to those groups. It favors a payment of subsidies on butter to reduce the price to consumers without depressing it for producers. It suggests that the subsidies might be earned by a crown company exercising a monopoly on the importation of oleo. That commodity could then be imported in times of butter shortage and high prices, or shut off in times of low prices and depressed conditions in the dairy industry.

It takes no imagination to forecast the scorn which will be poured on these proposals; nor the direction from which it will come. They will be denounced as visionary, complicated, and wildly impracticable. Yet similar schemes are already in operation. The Milk Marketing Board of England and Wales, perhaps one of the most brilliantly successful large scale co-operatives in the world, is carrying out exactly the first half of the program. Its achievements on behalf of both producers and consumers, under the most difficult conditions of chronic feed shortages, rationing, and deepening national poverty are beyond praise.

The whole program, including the importation of competing products, may be seen in the operation of the sugar industry in Eire. The government of that country retains a controlling interest in its sugar factories, all of which were built with public assistance. They normally provide only three-quarters of the consumptive demand. Import and sale of the required balance are handled under government license. The government can thereby influence the price of raw beets to the farmer, or the price of the finished product to the consumer.

Transposed to Canada and applied to the dairy industry this form of organization would be a double edged protective weapon. It would protect the consumer against the possibility of the exploitation of a monopoly by producers or distributors. It would protect producers from a disruption of their industry by the influx of a cheap competing import. It could be used to keep prices in line with other moving price indexes.

Whatever merits or demerits the proposed program may have, however, there is little hope of its early adoption. Among its opponents will be those farmers producing for the whole milk market who will not willingly relinquish the advantages of their favorable geographic location. Its very nature requires national acceptance and operation. Its reception in different provinces will vary. It is exceeding doubtful if agricultural co-operation is strong enough all over Canada to engage the formidable opposition which would be raised. Nevertheless, the proposals indicate for the first time that the oleo position may not have to be taken by frontal attack.